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Addresses

MEDICINE AND THE UNIVERSITY.*

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BALTIMORE.

I believe that I make no mistake in assuming that the honor of the invitation to deliver this address came to me mainly through the official position which I chance to hold in the Association for the Advancement of Science and the desire to give prominence on this occasion to the sciences of nature in view of the approaching meeting of the association in this place. I must, however, disclaim any especial competence to speak for these sciences, and I know not where there is less need in our country of emphasizing the importance and significance of the natural and physical sciences, or where the representatives of these sciences have brought higher distinction to themselves and to their university, than here in the University of Chicago.

The past century is memorable above all others for the gigantic progress of the natural and physical sciences—a progress which has influenced more profoundly the lives and thought, the position and prospects of mankind, than all the political changes, all the conquests, all the codes and legislation. In this marvelous scientific advancement in all directions the sciences of living beings and their manifestations have progressed as rapidly and have influenced the material, intellectual and social conditions of mankind as much as the sciences of inanimate matter and its energies. So far as the happiness of human beings is concerned, there is no other gift of science comparable to the increased power acquired by medicine to annul or lessen physical suffering and to restrain the spread of pestilential diseases, although what has been accomplished in this direction is small indeed in comparison with what remains to be achieved. Man's power over disease advances with increased knowledge of the nature and causes of disease, and this increase of knowledge has its sources in the educational system.

In asking your attention on this occasion to some of the conditions and problems of medical education and research, particularly in their relation to the university and to circumstances existing in this country, I am aware that the theme is trite and that I can add little that is new to its discussion, but the subject, however wearisome, requires ever renewed consideration so long as the conditions remain as unsatisfactory as at present and so many problems await final solution. Especially is it important that the nature of the problems should be realized by the teachers and authorities of our universities. I know that in this university much earnest thought has been given to questions of medical education, and wisely so, for I have every confidence that the medical department of this university, already doing such good work, is destined to be a leader in the promotion of higher medical education and the advancement of medical knowledge on this continent.

The historical and the proper home of the medical school is the university, of which it should be an integral part co-ordinate with the other faculties. Before there was a faculty of law at Bologna or of theology at Paris there was a school of medicine at Salernum, which, as is well known, occupies an interesting and unique position in the history of the origin and development of universities. From this early period to the present day no other type of medical school has existed on the continent of Europe than that of the university, and this union has been of mutual advantage, the renown of many universities being due in large part to their medical faculties, and these receiving the fostering care and the ideals of the university.

It was under the influence of these sound traditions of the proper relation of medical teaching to the universities that the first medical schools in this country were founded, that of the College of Philadelphia, now the University of Pennsylvania, in 1765; that of Kings College, now Columbia University, in 1767, and after somewhat longer intervals those of Harvard, Dartmouth and Yale. The model for these early schools was the medical department of the University of Edinburgh, which derived its traditions from the University of Leyden, as these in turn can be traced back to the great Italian universities of the sixteenth century. We can contemplate with much pride and satisfaction the early history of these first American medical schools, which, notwithstanding their feeble resources, were imbued with a spirit of high purpose and just recognition of the qualifications needed for the pursuit of medicine as a learned profession.

It is deeply to be regretted that their successors did not continue to build on such foundations as those laid by John Morgan, William Shippen and Samuel Bard, but rather adopted and carried much further the plan of the proprietary medical schools which originated in England in the latter part of the eighteenth century and attained their highest development there during the first three decades of the following century, after which the hospital medical schools of a type peculiar to that country gained the ascendancy. We can transfer from our shoulders, however, only a minor part of the responsibility for the conception and establishment of the proprietary medical school, for the English form of this school was a harmless thing which never dreamed of conferring the doctor's degree and was regarded with disfavor by examining and licensing bodies.

The proprietary medical school, conducted for gain, divorced from any connection with a university and free from any responsible outside control whatever, empow-

* An address delivered at the convocation exercises of the University of Chicago, Dec. 17, 1907.

ered by the state to usurp the university's right of conferring the doctor's degree and at liberty to set whatever standards it chose for obtaining this degree, which carried with it the license to practice, is a phenomenon unique in the history of education and a contribution to systems of education for which America is entitled to the sole credit. This is the type of medical school which prevailed in this country during the greater part of the nineteenth century, and familiarity has made it difficult for us fully to realize how anomalous and monstrous it really is. Even in the case of those schools which were united with a college or university the connection became in most instances so loosened as to be merely nominal and to secure practical autonomy to the medical school. In the common type of these schools there was no requirement of preliminary study worthy of the name, the only practical training was in the dissecting room and an occasional amphitheater clinic, and the degree and license to practice followed the passing of an easy examination after attendance on two annual courses of lectures lasting five or six months each, sometimes an even shorter period, the student hearing the same lectures each year.

It is needless to say that such conditions brought great reproach to American medicine and introduced evils from which we are not yet wholly free. Nevertheless the system, bad as it was, can be painted in too dark colors. The rapid multiplication of medical schools which followed the second decade of the last century was, although excessive, in response to the needs of a rapidly developing country pushing the boundaries of civilization ever westward. Still it would be difficult to find a sound argument for increasing the hardships of frontier settlements and struggling communities by a supply of poor doctors.

The main relief to the picture is that the results were not so bad as the system. Many of the teachers were devoted, able men who imparted sound professional traditions and whose personality in a measure remedied the defects of the system. The native force, ability and zeal of many students enabled them to overcome serious obstacles and to acquire in the course of time, in spite of adverse circumstances, a mastery of their calling, perhaps a resourcefulness engendered by these circumstances, for even under the best conditions education does not end with the modicum of knowledge imparted in school and college. Some were so fortunate as to be able to supplement their inadequate training by European study. But among those without foreign training who were entirely the products of American conditions not a few were the peers of their European contemporaries, such as Daniel Drake, Jacob Bigelow, John D. Godman, William Beaumont, Nathan Smith Davis, Samuel D. Gross, Austin Flint, Marion Sims and others who have left names illustrious in the annals of our profession. Native vigor and resourcefulness enabled such men to surmount defects of an educational environment to which the average man must succumb.

Most gratifying is the rapidity with which medical education has risen during the last two decades from the low estate to which it had sunk during the greater part of the past century in this country. Among the more important causes contributing to this result may be mentioned the operation of laws transferring and, in fact, restoring the licensure to practice from the medical schools to state boards of examiners, whereby worthless medical schools are crowded to the wall and out of existence and others have been compelled to raise their standards, the moral pressure exerted through an awakened sentiment for reform on the part of the organized profession and the better schools, closer union between medical school and university and the consequent interest of university teachers and authorities in the problems of medical education, the example set by a few schools of a high order, endowment—although very inadequate—of medical education, which formerly was almost wholly neglected as an object in need or worthy of private or public beneficence, the advancement of medical science and art, necessitating improved methods and higher standards of professional training, and a juster and wider appreciation of the significance of curative and preventive medicine to the welfare of the community.

The history of medical education in America is still in the making, but we now have a number of schools with high standards and adequate equipment capable of giving to students of medicine a professional education as good as that to be obtained in European universities. The best and most progressive schools are those in organic union with a university, and it seems clear that to schools of this type belongs the future of higher medical education in this country. Nearly twenty years ago in an address at Yale University I endeavored to set forth the advantages of the union of medical school and university, and, as addresses, fortunately for those in the habit of giving them, are soon forgotten, I shall here summarize what I conceive to be the more prominent of these advantages.

Of all professional and technical schools the medical, with its requirements for laboratories, hospitals and teaching force, is the most costly. A medical department of a university is much more likely to be the recipient of endowment funds than an independent school, and the university is a safer and more suitable custodian of such funds.

In manifold ways the environment of a university is that best adapted to the teaching and the advancement of medicine. The medical school needs the ideals of the university in maintaining the dignity of its high calling, in laying a broad foundation for professional study, in applying correct educational principles in the arrangement of the curriculum and in methods of instruction, in assigning the proper place and share to the scientific and the practical studies, in giving due emphasis to both the teaching and the investigating sides of its work, in stimulating productive research, and in determining what shall be the qualifications of its teachers and of the recipients of its degree. Most invigorating is the contact of medical teachers and investigators with workers in those sciences on which medicine is dependent—chemistry, physics and biology.

In the selection of teachers—a matter of the first importance—a university is in a superior position to secure the best available men wherever they can be found, regardless of any other consideration than fitness. Too often this choice has been determined in our medical schools by irrelevant influences and considerations and an outlook upon the world scarcely more than parochial in extent.

In the difficult matter of adjustment of professional training to conditions of collegiate education peculiar to our country there are manifest advantages in the union of medical school with university, especially where the periods of liberal and of professional study are made to overlap. Where the sciences adjuvant to medicine, as general chemistry, physics, zoology and botany, are

included in the medical curriculum, as is done in the German and French universities, it is economical and highly desirable that they should be taught in the collegiate or philosophical faculty rather than that separate provision should be made for them in the medical faculty, where they do not properly belong.

The benefits of union of medical school and university are reciprocal, and not to the medical school alone. A good medical faculty, properly supported and equipped, is a source of strength and of renown to the university possessing it, and its work in training students and in extending the boundaries of knowledge greatly increases the usefulness of the university to the community. Nor is there anything in this work which does not appertain to the proper functions of a university, however high its ideals. Indeed I venture to assert that the present and prospective state of medicine and its relations to the well-being of individual man and of human society are such that there is no higher or nobler function of a university than the teaching of the nature of disease and how it may be cured and prevented, and the advancement of the knowledge on which this conquest of disease depends. If it be said that the medical art is largely empiric, I reply that this, while true, does not make medicine unworthy of shelter in the university. The empiric method of discovery by trial and error has its glorious triumphs as well as the scientific and is not to be disdained. To it we owe such beneficial discoveries as the curative properties of quinin in malaria, vaccination against smallpox and the anesthetic uses of ether and chloroform.

But there is a scientific as well as an empiric side to medicine and the distinctive feature of modern medicine is the rapid extension of the former and the curtailment of the latter. The fundamental medical sciences — anatomy, physiology, physiologic chemistry, pathology, pharmacology, bacteriology and hygiene — are rapidly advancing and important departments of biologic science, which have contributed and will continue to contribute enormously to the progress of practical medicine. In an address which I had the honor to deliver somewhat over ten years ago at the dedication of the Hull Biological Laboratories of this university I took occasion to dwell with some detail upon the biologic aspects of medicine.

We should add to the specialized medical sciences already mentioned the study of the problems presented by the living patient in hospitals and laboratories attached to hospital clinics where chemical, physical and biologic methods can be applied to the investigation of clinical problems which do not fall within the scope of other laboratories or can be less advantageously attacked in them. These clinical investigating laboratories are an important addition to the older analytical and statistical methods of study of disease and mark an advance from which valuable results have been obtained and more valuable ones are to be expected. It is highly desirable that our medical clinics should be organized with regard to this newer direction of work, for which they will require considerable funds.

The science of medicine has advanced in recent years more rapidly than the art and in its various branches it constitutes to-day a field of work most alluring and most rewarding to the properly trained scientific investigator, who, if he have the rare genius for discovery, may reap a harvest rich in blessing to mankind.

But the are of medicine has profited greatly by the application of scientific discoveries. The physician and the surgeon to-day can do far more in the relief of physical suffering and in the successful treatment of disease and injury than was formerly possible, but the great triumphs have been in the field of preventive medicine. The horizon of the average man's interest in medicine scarcely extends beyond the circumference of his own body or that of his family, and he measures the value of the medical art by its capacity to cure his cold, his rheumatism, his dyspepsia, his neurasthenia, all unconscious, because he does not encounter them, of the many perils which medicine has removed from his path through life. What does he know of the decline in the death-rate by one-half and of the increase in the expectation of life by ten or twelve years during the last century? How many are there whose attention has been called to the significant fact that this increase in the expectation of life ceases with the forty-fifth year because we have as yet no such insight into the causes and prevention of the organic diseases of advancing life as we have into the manner of propagation of infectious diseases, which are responsible for the larger part of the mortality of the earlier years? The suffering and the waste of energy, money, production and human lives from preventable sickness and death are still incalculable, but how little heed do legislators and authorities in our national, state and municipal governments pay to the appeals of physicians and enlightened economists to make adequate provision to check this waste! For this condition of things the medical profession is largely responsible in failing to enlighten the public and in shrouding its art with the mystery of an occult science, but it is beginning to rise to its high mission of public education in ways of preserving health and of preventing disease.

I have touched on these matters relating to the present and future state of the science and art of medicine, not with the view of recounting the achievements of modern medicine, but to indicate something of their importance to individual and to civic life and to show that in fostering the teaching and study of medicine the university finds a field worthy of its highest endeavors in the propagation of useful knowledge and in service to the community.

From what has been said we may, I think, assume with confidence that the best and in time the prevailing type of American medical school is destined to be that represented in medical departments in vital union with universities. In so far our system of medical education will conform to that of Germany and France, but in an important respect there is and will remain a difference due to the fact that in those countries the courses of study and the qualifications for the degree and the license to practice are moulded into practical uniformity by the regulations of the state. Nothing is more characteristic of the conditions of medical education in our country than the great diversity of the requirements and curricula of the various medical schools, even of those of the better sort. Entire uniformity is not to be expected and not to be desired, but at least such a measure of agreement should be secured as will permit students to pass freely from one university to another and to acquire, it is to be hoped, something of the habit of wandering which is such an enviable feature of student life in the German universities.

No problem of medical education in this country is so perplexing or has given rise in recent years to so much discussion and difference of opinion as that of the preliminary education to be required for the study

of medicine. If I could announce a universally satisfactory solution of this problem, I should claim the honors of an important discovery, but as I can not do so I shall forego on this occasion its detailed discussion, with a self-sacrificing forbearance which I trust may be commended by my hearers. It must suffice to enumerate the attempts at a solution, premising, what is generally recognized, that the difficulties arise from the anomalous development of the American college for many years, making it, however admirable it may be for certain educational uses, almost unadjustable to the needs of professional education.

The preliminary requirement of the bachelor's degree in arts or science should, in my judgment, carry with it the specification of collegiate laboratory training in physics, chemistry and biology, with a reading knowledge of French and German. These requirements have been in successful operation in the Medical Department of the Johns Hopkins University since its foundation in 1893, their adoption being necessitated by the acceptance of the terms of Miss Garrett's gift of endowment. We are satisfied with the working of these requirements and would not lower them if we could, but it must be conceded that, while there is room for medical schools with these standards, the country is not ripe for their general adoption. The Medical Department of Cornell University has recently announced the intention to introduce similar requirements, and the Harvard University Medical School demands the bachelor's degree without the other requirements mentioned.

In order to meet the objection that the average age of graduation from our colleges is at least two years beyond that at which professional study usually begins in Europe, various attempts have been made to truncate the college course or to telescope a quarter to a half of it into the period of professional study, making one course of study count for two degrees. Manifest objections and embarrassments attend all of these attempts to find a suitable stopping place between the high school and the end of the college course. The plan adopted in this university to demarcate with some sharpness the first two years of the college course from the remainder and to exact the completion of these two years of study as the requirement preliminary to the study of medicine has much to recommend it under existing conditions. I learn from the last report of the Council on Medical Education of the American Medical Association that one medical school, the Medical Department of Western Reserve University, demands as a prerequisite to the study of medicine three years of study in a college of arts or science, sixteen require two years of collegiate study, eleven of these schools being in the middle west or west, and thirty-one require one year, of these, nineteen being in the middle west or west.

The Council on Medical Education just mentioned, of which Dr. Bevan is the energetic and efficient chairman, has entered as a strong force for the elevation of standards of medical education in this country, and, while it has not the power of the British General Medical Council to make effective its recommendations, it can exert a most beneficial influence. It is significant that at its first conference, held in 1905, it recommended as the minimum preliminary requirement to be generally adopted by our medical schools an education sufficient to enable the student to enter the freshman class of a recognized college of arts or a university, and now it recommends that in 1910 to this shall be added a year's study of physics, chemistry and biology, with one modern language, preferably German. The time has gone by when it is necessary to emphasize before an audience such as this the importance of laboratory training in physics, chemistry and general biology as fundamental to the successful study of medicine.

While it is not feasible to exact the preliminary study of the ancient classics, save some acquaintance with Latin, I feel that they are of value to the physician and that a liberal education and broad culture raise the influence and standing of the physician in the community, enhance and widen the intellectual pleasures of his life, instil an interest in the history of medicine and give him greater joy in the pursuit of a noble profession. It is important, especially for medicine, that this culture be imparted by methods of liberal education which do not blunt man's innate curiosity for the facts of Nature.

There can be no more striking evidence of the progress of medical education in this country during the last quarter of a century than that it is no longer the laboratory, but the clinical side of medical teaching which offers the urgent problems. Only a few years ago the cry was the need of laboratories; now, while a sufficient supply of good laboratories is still beyond the resources of many medical schools, their value is fully recognized and all of our better schools possess them and are devoting probably as much of the time and energies of teachers and students to work in the laboratories as is desirable. There is even some risk, I believe, that a subject which can be studied with facility and advantage in a laboratory may acquire, on this account, a position in the scheme of medical studies disproportionate to its relative importance. The structure of organized beings, normal or diseased, for example, is eminently adapted to laboratory study, and for centuries normal anatomy had an educational value all its own, because it was the only subject which students were taught in the laboratory, whereas the study of function, certainly not less important, is much more difficult to approach by the laboratory method, and even at the present time normal physiology and especially pathologic physiology do not receive the attention in medical education to which their importance entitles them.

It is interesting to note the impressions which Professor Orth of Berlin, an acute observer and most competent judge in all matters pertaining to medical education, received from his visit to this country three years ago regarding our laboratories and clinics. In an address conveying these impressions to the Berlin Medical Society he expresses his astonishment and satisfaction that, in contrast to the prevalent opinion in Germany as to our medical schools, he found that fully as much emphasis is placed on laboratory teaching here as there, that the laboratories which he visited are as good, their arrangements in some instances arousing his envy, and the methods of teaching practically the same as in Germany, whereas he gathered the impression that the opportunities and methods of clinical teaching are less satisfactory than in Germany and not commensurate with those of our laboratories.

I do not desire to instil sentiments of undue complacency regarding the condition of laboratory teaching in our medical schools, for there is still room for much improvement in this regard. Many schools are sadly deficient and even the best have not all that is needed in the supply and maintenance of laboratories, but the time has come to give especial emphasis to directions of improvement in the teaching of practical medicine and

surgery. The making of good practitioners should always be kept to the front as the prime purpose of a medical school.

I believe that in most medical schools at present the clinic falls behind the laboratory in affording students opportunities for that prolonged, intimate, personal contact with the object of study, in this instance the living patient, which is essential for a really vital knowledge of a subject. To secure this, amphitheater clinics and ward classes alone do not suffice, valuable as these are, but students under suitable restrictions and supervision and at the proper period in their course of study should work in the dispensary and should have free access to patients in the public wards of hospitals, acting in the capacity of clinical clerks and surgical dressers as a part of the regular, orderly machinery of the hospital.

In order to place the clinical side of medical instruction on the same satisfactory foundation as that of laboratory teaching, two reforms are especially needed in most of our medical schools.

The first is that the heads of the principal clinical departments, particularly the medical and the surgical, should devote their main energies and time to their hospital work and to teaching and investigating without the necessity of seeking their livelihood in a busy outside practice and without allowing such practice to become their chief professional occupation. This direction of reform has been forcibly urged in this city and elsewhere by my colleague, Dr. Barker, whom we have reclaimed from you, in notable papers and addresses.

The other reform is the introduction of the system of practical training of students in the hospital, which I have indicated, and with it the foundation and support of teaching and investigating laboratories connected with the clinics, to which I have already referred, necessitating the possession of a hospital by the medical school or the establishment of such relations with outside hospitals as will make possible these conditions. This subject, as thus outlined, I made the theme of an address at the opening, six months ago, of the new Jefferson Medical College Hospital in Philadelphia, and I shall now recur only to the point which I endeavored there to establish, that the teaching hospital subserves the interest of the patient not less than that of the student and teacher and is the best and most useful kind of public hospital.

Hospitals make generally a stronger appeal to public and private philanthropy than the support of medical education, but I do not hesitate to affirm that a general hospital in a university city, whether maintained by public funds or by private benevolence, serves the community and the interests of its patients far better when it is readily accessible and freely available for the purposes of medical education than when it is divorced from connection with medical teaching. Witness the great public hospitals in Vienna, Berlin, Munich, Leipsic, Paris, London, Edinburgh, Dublin and a few in this country. It is most deplorable both for the hospitals and for the medical schools that these two institutions, which should be linked arms of medical education, should have developed in this country so far apart, that state and municipal authorities and private founders should have so little realization of the inestimable advantages which close association with a good medical school can confer on a hospital, and that the immense possibilities of public hospitals in our large cities for the education of students and physicians and for the advancement of medical knowledge should be utilized to so small an extent, often not at all.

It would be one of the greatest benefits to the cause of higher medical education if the University of Chicago, for its medical department, should come into possession of a good general hospital and fortunate the hospital which enters into this relationship. This university, the source of so many important contributions to the advancement of knowledge and of higher education, will then be, in larger measure than it now finds possible, a center of similar service to medicine.

Medical education partakes fully of the freedom, so amazing often to many of our European colleagues, with which we unhesitatingly try all sorts of educational experiments in this country—it is to be hoped and expected for the ultimate benefit of systems of education, whatever the immediate results may be in individual cases. The theme of this address naturally suggests many topics relating to methods of teaching and to the medical curriculum which are questions of the day, but which I must lay aside through lack of time. On one only I beg to say a few words.

In contrast to the German system the tendency in our American medical schools has been toward a rigid curriculum, which, though widely divergent in different schools, is to be followed in precisely the same way by all students without any consideration of differing ability, capacity for work, special aptitudes and interests. One of many unfortunate results is that subjects and courses of study which can not properly be imposed as obligatory on already overburdened students find no place in our medical schools, which should aim to cultivate the whole field of medicine. I agree with Dr. Bowditch and my colleague, Dr. Mall, to whose admirable presentation of this subject I would refer those interested, that our students should have a greater latitude of choice than is now customary in subjects to be pursued, in the amount of time to be devoted to their study and in the order in which they may be taken. Complete freedom can not be granted. A minimum requirement for the principal subjects must be made obligatory, but if this minimum is properly fixed there remains room for a considerable range of choice of subjects and courses, greatly to the advantage of student and teacher. At the Harvard Medical School the system of electives for the fourth year of the course has been in operation for several years, and other medical schools have also introduced a similar plan. At the beginning of the current academic year we adopted at the Johns Hopkins Medical School a scheme by which a large number of elective courses are offered throughout the four years, and the plan is now working most successfully.

Some of our state boards of examiners are greatly exercised over the differences which they find in the curricula of the various medical schools in this country, and which in themselves are merely an indication that there is, and, in my judgment, there can be no agreement of opinion as to every detail of a medical curriculum. There are doubtless defects to be remedied, but in attempting to apply remedies these state boards should concern themselves with no other question than that of educational standards. They could make no greater mistake nor inflict more serious injury on the efforts of the better schools to improve their methods of teaching than to attempt to impose a uniform and rigid obligatory curriculum on all schools. They do not in their examinations apply any practical tests

whatever to determine the candidate's fitness for the practice of medicine, whereas our better schools are exerting every effort to increase their efficiency by substituting practical work in laboratories, hospital wards and out-patient departments for didactic lectures. The work of students who gain their knowledge by serving as clinical clerks and surgical dressers in the hospital can not be measured by time standards in the same precise way as that of attendance on expository lectures. Above all, the better schools should not be hampered by restrictions imposed by state boards of examiners in freedom to extend the system of electives of which I have spoken.

The medical department of a university should be a school of thought, as well as a school of teaching, *academia* as well as *schola*. Although there has been gratifying progress in recent years, our medical schools have not advanced along the path of productive research to the same extent that they have in the way of improvement of their educational work. There are several reasons for this condition. For one thing we have been too busy setting our houses in order for their primary uses in the training of students to have given the requisite attention to other questions which, however important, may have seemed for the moment less urgent. With the degree of emphasis thus placed on the educational side teaching gifts rather than investigating capacity have been sought as the most desirable qualification of professors in our medical schools. The power of imparting knowledge, gained second-hand, fluently and even skilfully, is not an uncommon gift and is possessed by many who have never engaged in research and have no especial inclination or aptitude for it, but the teaching of him who has questioned Nature and received her answers has often, and I think commonly, in spite it may be of defects of delivery, a rarer and more inspiring quality.

A medical school or university can not expect to fill all of its chairs with men with the genius for discovery —if it has one or two it has a treasure beyond all price —but every effort should be made to secure as occupants of these chairs from among those who are available, wherever they can be found, the ones who have demonstrated the greatest capacity to advance knowledge by original investigation and the ability to stimulate research. Until this principle is more fully and generally recognized and acted on in the selection of heads of departments, our medical schools as a class will not become important contributors to knowledge. It is not enough that a few schools should encourage and provide for original investigation; the field must be a wide one in order to attract many to a scientific career, for of the many only a few will be found endowed with the power of discovery. There is no possible way of recognizing the possessor of this power before he has demonstrated it. Even when a university has succeeded in attaching to it those who can conduct scientific inquiry successfully, how often are their energies sapped by lack of adequate resources and enough trained assistants and by too great burden of teaching and administrative work imposed on them!

It is evident from what has been said, and indeed it has been a tacit assumption throughout this address, that, while with present resources considerable improvement in medical education in this country is possible, further progress is largely a question of ways and means. What makes modern medical education so costly is precisely its practical character, necessitating laboratories and hospitals, and it can be made self-supporting no more than any other department of higher education. For reasons already stated, the medical departments of strong universities are the ones most likely to receive the funds needed for the support of medical education and are in general the most deserving. There is a great future before the medical schools of many of our state universities, which are already developing with such promise and are sure to receive in increasing measure aid from the state as their needs and the benefits accruing to the community from their generous support are more and more appreciated. Other universities must look to private endowment, and I have endeavored to show that they should foster their departments of medicine as zealously as their other faculties. The university chest should be opened, so far as possible, to supply needs of the medical school, and authorities of the university should present the claims of medical education to financial aid as among the most important in their domain, and they can do so to-day with a force of appeal not possible a quarter of a century ago. President Eliot, whose services to the cause of medical education are great, in his address at the opening of the new buildings of the Harvard Medical School, set forth with admirable force and clearness the changes which advancing medicine has brought in the vocation of the physician, his greatly increased capacity of service to the community and his still higher mission in the future.

The discoveries which have transformed the face of modern medicine have been in the field of infectious diseases, and in no other department of medicine could new knowledge have meant so much to mankind, for the infectious diseases have a significance to the race possessed by no other class of disease and problems relating to their restraint are scarcely less social and economic than medical. The public is awakening to this aspect in the case of tuberculosis, and I need only cite as a further example the necessity of keeping in check the malarial diseases and yellow fever for success in digging the Isthmian Canal, an undertaking in which the triumphs of the sanitarian, Colonel Gorgas, are not outrivalled by those of the engineer. Such victories over disease as those of the prevention of hydrophobia by the inoculation of Pasteur's vaccine and the antitoxic treatment of diphtheria have made an especially strong impression on the public mind.

More than all that had gone before in the history of medicine the results achieved during the last quarter of a century in exploration of the fields of infection and immunity opened by the discoveries of Pasteur and of Koch have stirred men's minds to the importance of advancement of medical knowledge, and medical science at last has entered into its long awaited heritage as a worthy and rewarding object of public and private endowment. But it is to be noted that it is not so much the education of doctors as this advancement of knowledge which makes the strong appeal, as may be illustrated by the splendid foundation of the Rockefeller Institute for Medical Research through the enlightened generosity of the founder of this university, the Phipps Institute for the Study and Prevention of Tuberculosis, and the Memorial Institute for the Study of Infectious Diseases, established in this city by Mr. and Mrs. Harold McCormick, which under the efficient direction of Dr. Hektoen has become a most active and important contributor to our knowledge of infection and immunity.

These magnificent additions to the resources of this

country for the promotion of medical investigations are of inestimable value, but not one of them could have justified its existence by results if it had been established in America thirty years ago, when medieal education was so defective. The dependence of research on education is of fundamental importance. The prime factor influencing the development of scientific research in any country is the condition of its higher education. Scientific investigation is the fruit of a tree which has its roots in the educational system, and if the roots are neglected and unhealthy there will be no fruit. Trained investigators are bred in educational institutions. Independent laboratories are dependent on a supply from this source, and without it they can not justify their existence, but where proper standards of education exist such laboratories have a distinctive and important field of usefulness. I contend, therefore, that those interested in the advancement of medical knowledge should not be indifferent to the condition of education in our better medical schools and should not rest on the assumption that the educational side can be safely left to take care of itself.

Moreover, those who are to apply the new knowledge are physicians and sanitarians. The public is vitally interested in the supply of good physicians, never so much as to-day when their power to serve the welfare of the community has been so vastly increased and is rapidly growing, and if it wants good doctors it must help to make them.

I have been able, within the limits of this address, to indicate only a relatively small part of the increased strength gained by both medical school and university by the combination of their forces, but I hope that I may have conveyed some impression of the rich fields of discovery, of the beneficent service to the community, of the important educational work opened to the university by close union with a strong department of medicine, and of the inestimable value to medicine of intimate contact with the fructifying influences and vitalizing ideals of the university. Where is there a university which, if provided with the requisite resources, gives stronger assurance of securing these mutual benefits than the University of Chicago, so fruitful in achievement during its brief but eventful history, so vigorous in its present life, so full of high promise for the future, and where in all this land is there a location more favorable to the development of a great university medical school than here in the city of Chicago? Such a development is bound to come and the sooner it arrives the earlier the day when America shall assume that leading position in the world of medical science and art assured to her by her resources, the intelligence of her people, her rank among the nations and her high destiny.

DENTISTRY AS A TRUE SPECIALTY OF MEDICINE.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON STOMATOLOGY AT THE FIFTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, 1907.

MORRIS I. SCHAMBERG, D.D.S., M.D.
NEW YORK CITY.

There is no subject more worthy of consideration, no time more fitting, no place better suited to the act, than the discussion now before the Section on Stomatology of the American Medical Association of the means whereby dentistry is to become a true specialty of medicine.

This departure from the customary form of address by the chairman is prompted by the importance of our deliberation on a theme which is so closely interwoven with the interest and the work of this Section.

It is, indeed, unfortunate that the dental profession, of which we are justly proud, is not represented in this Section by a greater membership, since the degree in medicine is not an essential to eligibility. Many of the active members of this Section are men who hold both medical and dental degrees. There are many more men, however, in and out of this Association who, with but the degree of dentistry, are sufficiently broad in their views, scientific in their work, and practical in their ideas, to see the need for the change that will place stomatology on an equal basis with the other specialties in medicine.

In 1881 the American Medical Association recognized stomatology as a distinct branch of medicine, and this Section, to which you are at present lending your interest, was organized. Since that time much good has been accomplished by the publication in THE JOURNAL of the American Medical Association of papers which, bearing on the correlation of oral and systemic disease, have opened the purely medical eye to the work that is being done by the exponents of dentistry. It now becomes the duty of this Section to open the purely dental eye to the method by which dentistry, or rather stomatology, can be made a still greater credit to the men who practice it, a more honored branch of medicine and a specialty which will render a greater service to human kind.

So long as dentistry remains a separate profession from medicine, so long will differences exist between the medical man and the dentist, so long will dentistry be viewed as the less scientific, so long will its mechanical attainments stand out as paramount and its therapeutic value prove insignificant.

The wonderful strides made in dentistry have been along mechanical lines, and this, to some extent, at the expense of medical and surgical training. The evolution of dentistry from the mechanical age to the therapeutic and surgical age, is inevitable. There was a time when the alleviation of dental ailments, like many of the minor surgical ills, was in the hands of the self-styled surgical barber, who practiced cupping, leeching and the extraction of teeth. Later it became necessary for an individual who wished to conduct such a practice to spend an apprenticeship in the office of a predecessor, who handed down to the succeeding generation methods, not alone for the relief of symptoms, but for the retention, restoration and substitution of the affected part.

To-day in dentistry we pay humble recognition and respectful homage to those who have preceded us and who have done much to advance this noble science, and yet, without reflection on the pioneers, we demand of those who would practice at the present time a degree, earned in a school after years of preparation and study; formerly one, then two, now three, and shortly it may be four years, to say naught of the increase of the preliminary requirements to entrance into dental schools.

With that which now comprises a complete course in dentistry we are but one step removed from the adoption of the full medical course with a supplementary two years devoted to dental studies. The two years thus spent would take the place of the medical practitioner's interneship in a hospital and the specialist's year or two abroad. Medical men thus equipped themselves before embarking on their professional careers. How then can

the stomatologist do less and hope to gain full recognition as specialist of medicine?

It is the fear of your chairman that unless radical steps are taken to make dentistry a true specialty of medicine, ultimately there will be a marked distinction between stomatology and dentistry. Already there are many men who see the advantage of supplementing their dental training with the medical course, and stomatologic societies are being organized, composed mainly of practitioners holding the medical degree. This is attested by the following communication from abroad:

FIRST FRENCH CONGRESS OF STOMATOLCGY.

Dear Doctor:—The Stomatologic Society, wishing to celebrate the twentieth year of its foundation, has decided to organize a Congress of Stomatology in Paris, which will be held Aug. 1 to 5, 1907.

This congress will be the long awaited consecration of those professional ideas and scientific principles which our society has always defended ever since its formation. Its aim will be to demonstrate clearly that stomatology is a branch of medicine, a medical and surgical specialty, just as much as is ophthalmology, laryngology, etc., and requiring from its adepts a complete knowledge of medicine and including all the scientific studies which in all countries are recognized as essential for obtaining the degree of M.D.

The diseases of the mouth, teeth and jaws are closely related to other diseases and with the general pathology of the organism. A correct knowledge of this relation is necessary for all who practice dental science, or rather stomatology with all that it includes. Special technical training is most necessary for the perfection of the surgeon and for any other specialist, and is easily acquired by the learned physician, but must be secured by a rational method of instruction.

Stomatology includes all that is known in this specialty whether technical or scientific, and the stomatologist applies all to the care of the mouth, teeth and adjacent parts. This scientific and practical conception of our art, which is so obviously applicable to the public welfare, does not alone apply to the French stomatologists, but equally to a large number of stomatologists of other countries as well, whose works, publications and scientific societies have long since shown us their high medical culture and professional standing.

We hope that our First Congress of Stomatology will be honored by your presence; for it is only by the united efforts of all our confrères from all other countries that its real value and significance will be established. Your presence will indicate the general character of our aims. The medical tie unites us all in one common sympathy and brotherhood, which will insure unity and success of our cause, which will be at the same time scientific, moral and social.

COMMITTEE OF ORGANIZATION.

Honorary Presidents: MM. Galippe and Redier.
President: M. Cruet.
Vice-presidents: MM. Claude Martin and J. Ferrier.
General Secretary: M. Chompret.
Secretaries: MM. Beliard and Bozo.
Treasurer: M. Gires.
Members: MM. Amoedo, Bachelier, Bacque, Beal, Beltrami, Besson, Bouvet, Bouyer, Bugnot, Capdepont, Caumartin, Chemin, Courchet, I. Davenport, Dunogier, Fare, Fleury, Frey, Gaillard, Granjon, Hugenschmidt, Mainguy, Marais, Maurel, Montes, Nogue, Nux, Nuyts, Pietkiewicz, Pitsch, Queudot, P. Robin, Rodier, Rosenthal, Siffre, J. Tellier, Thesee, Thomas, Tourtelot.

Article 2 of the regulations of the First French Congress of Stomatology reads: Its membership may consist of: 1. All members of the Stomatologic Society of Paris (both charter and regular members) and also of French and foreign associate members. 2. All French and foreign doctors of medicine who are interested in stomatology. 3. Individuals who, by reason of their work, knowledge or attainments, shall be admitted by the committee on organization.

It would be, indeed, unfortunate if dentistry and stomatology should become divorced; your chairman believes that it would be one of the worst calamities that could befall both dentistry and stomatology. If this is the accepted opinion of this body it would be well for us, through delegates from our Section that will attend the French Congress of Stomatology, to pledge our support to any movement which will further the interests of dentistry and stomatology as a unit, and to oppose seriously any action that would tend to separate them.

It is to be hoped that the symposium on "The Medical Education for the Dentist," which will follow, will contain valuable suggestions pertaining to this important topic, and will elaborate a system by which dentistry can become an integral part of medicine without friction or disruption in the dental ranks.

Great accomplishments are acquired only through needful sacrifice, but in our deliberation let us see that all phases of the subject are carefully considered so that injustice is done no one. Let us appoint a committee to compile a report of the most practical suggestions presented at this meeting, to be sent to the French Congress of Stomatology, to the National Dental Association, and to the prominent dental journals, so that this important movement may not die an untimely death on the western shore of the Atlantic.

The brief and incomplete outline that I have drawn for the conversion of dentistry as a separate profession to stomatology as a specialty of medicine implies:

1. The elimination of all dental schools unassociated with medical colleges or universities.

2. The attendance of all dental students on the full course in medicine instead of the present method of attending with the medical students the lectures on the elementary subjects.

3. The addition to medical schools of a chair of stomatology and a course on that subject to correspond with the amount of instruction given in ophthalmology, otology, rhinology, etc.

4. The purely dental and mechanical training to be acquired by a special course in the dental department, which will have its separate chairs in mechanical and operative dentistry, oral surgery, etc.

With the universal adoption by the better institutions of such a plan as this, little change in legislation controlling the practice of this specialty would be necessary. Those who are registered practitioners now would continue to practice, and with an increasing consideration and respect from the public as well as from their medical confrères, owing to the high station that the specialty had reached.

I will not dwell further on this subject, but will ask the most earnest consideration of this matter by this important body of dentists and stomatologists.

I can not bring my remarks to an ending without making brief reference to the arduous and efficient services of our genial secretary, who has for many years conducted the duties of his office with the greatest degree of satisfaction to the members of our Section. May his health permit him to remain active in the work of the Section until the successful culmination of the movement which is so warm to his heart, and to which I beg your unrelenting efforts.

Treatment of Mercurial Poisoning.—L. Sabbatani (*Riforma Medica*, July 13, 1907) states that experiments on rabbits demonstrated the efficacy of sulphydric acid in mercurial poisoning. It is given in small and frequent doses.

Original Articles

THE INTERRELATIONSHIPS OF MEDICINE AND DENTISTRY.*

HENRY C. REGISTER, M.D., D.D.S.
PHILADELPHIA.

It may be said that the results of the first systematic investigation of human anatomy were given to us by John Hunter, but in classifying the relationships of the different organs he described the teeth as parts of the skeleton.

Later anatomists have classified the teeth as dermal appendages, but have failed to correlate them with the nutritional mechanism of the body as they have the other organs, consequently the teeth have received little consideration, medically speaking, in their association with general disease conditions.

Later years, however, have demonstrated that the teeth are not extraneous organs, unassociated with the physical influences of nutrition, isolated as it were, after taking their functional position. They are intimately correlated in their anatomic makeup and depend on the general forces of life for their physiologic maintenance in a manner analogous to that of all other bodily tissues.

Physical laws present no isolated exceptions in nature and physical phenomena are all linked by indissoluble bands with that which has gone before and that which comes after.

Related facts, in obedience to universal law, no matter where or how found or how or where applied, form a scientific harmony. To investigate the laws of Nature in order that the children of men may acquaint themselves with the seeming mysteries that surround them and to apply the knowledge thus gained, is in itself the triumph of mind over matter. To know things is the correlation of mind with matter. The knowledge of the fundamental principles or natural laws that underlie all knowledge is the essential part of culture.

Fundamentals are the stepping stones that lie in the river of universal truth, allowing us to cross and recross to reach the tributaries and sources in the special fields of knowledge—medicine being one of them.

Is dentistry or stomatology a branch of that profession? Do medical men realize the importance of stomologic influences in their relation to the whole bodily organism? Has not the layman been biased in his judgment of dental practice by a false conception of its relationship to general medicine? Has there not been a generally accepted belief that the teeth, directly and indirectly, neither hold pathologic relations to the human system in general nor require the same kind of knowledge in their treatment nor offer the same opportunity for pathologic research as exists in other specialties of medicine?

Histologically, dentistry has been practiced in imperfect ways from an early date. Herodotus, the Greek historian, mentions dentistry as having been practiced as a special branch of medicine in Egypt. The first scientific knowledge we have relating to the teeth dates from the period of John Hunter, in 1771. Hunter was a great student and the most renowned anatomist of his time, but he had much to do with causing the teeth to be neglected by reason of his teaching that they were outside the cycle of vital influences.

Later investigation has shown that the physical difference between the teeth and other organs is slight. The teeth are most intimately influenced at different years of life by metabolism and by disease conditions, and they are influenced directly by reflexes from other organs and tissues subject to morbid changes.

These facts are forcing themselves on the dental profession through the insufficiency of the efforts of present day dentistry, based as it is generally on technical manipulative effort alone. Without grasping and using the correlated facts of general medicine that are now known to be influential in causing the pathologic conditions of the teeth, the practice of the dentist must remain handicapped.

Most laymen, medical men and many members of the dental profession look on dentistry as being exclusive and conclusive within its mechanical scope. This is to be seen in the repair of carious wastes without any regard to bacterial or systemic causation, and in the construction of artificial dentures without consideration of dynamic articulation or occlusion and in the extraction of teeth without consideration of possible septic infection. The reason that brings me to this conclusion is that our profession in a large measure shows a lack of appreciation and gives little or no thought as to the fundamental scientific essentials of their work. Disease of the dental apparatus may result directly from toxic or traumatic conditions or by reflexes and is often aggravated or intensified by a wrong diagnosis leading to improper treatment or neglect.

Among the numerous pathologic influences I will mention neuralgia; this disease in its idiopathic form being a functional disturbance and of frequent occurrence. It is usually confined to adult life, more frequent in women than in men. Any traumatism causing pressure to the ramifications of the fifth cranial branch, such as various morbid growths, pulp-stones or constrictions of the pulp, may result in reflexes of acute suffering of the nerve tracks terminating in the eye, the ear or the brain. Reflexes causing the most acute suffering and that have baffled the physician have come under my notice. I will relate a case:

History.—A woman, aged 55, suffered acute pain, more or less, in her eye, ear and facial region, but most constantly and acutely at the base of the cerebellum. She had been kept in a dark room under narcotics off and on for several months. Later I saw the case in consultation and finding the two superior right bicuspids keenly responsive to normal temperatures, I concluded to open into the pulp chambers. I found the pulp to be constricted about one-fourth the way up its radicular length, to the extent of not allowing a very small nerve broach to pass in, producing on the pulp a condition the same as if a string had been tied around it. Above and below this constriction the pulp and canal were of normal size. The removal of the pulp gave absolute and permanent relief.

Another case, which was one of local toxic poison:

History.—A physician, retired from practice, began to lose his health. He became seriously ill and was unable to get a proper diagnosis of his case. He was advised to take a trip to Europe. From this, however, he obtained no relief, and on his return called on me with reference to a soreness about the first superior left molar. I found the pulp devitalized and putrescent, with considerable soreness in and about the apical region and slight necrotic destruction of the alveolus. Considering the history of the case, the patient's health and the possibility of toxic influence that might arise from the affected molar, I advised extraction. This, in connection with cutting away the necrosed bone in the socket, followed by germicidal flushings, brought about a perfect return to health.

I could give a number of cases which I am sure all of you have had in your experiences, but these will suf-

* Read in the Section on Stomatology of the American Medical Association at the Fifty-eighth Annual Session, June, 1907.

fice for illustration. In diseases of the antrum of varied septic forms, including empyema, Dr. Kyle, who is an authority on rhinological subjects, states that 70 per cent. of cases are due to dental lesions.

The treatment of the immediate diseases of the teeth, claiming all the attention given them by the profession to-day, is in the main finger manipulation. Can not these diseases be better controlled through medical and technical treatment combined? Is the etiology of dental caries in its local and systemic causation so obscure as to be beyond solution? What are the physical influences that go to create susceptible and immune periods in tooth decay? Does not senile decay result mostly from systemic causation? Wherein is the carious susceptibility in pregnant women? Is pyorrhea alveolaris a disease, or, as Dr. Talbot says, "a sequence of a disease"? Is it local or constitutional, or both? Will finger manipulation cure it? Do we recognize to the extent that Dr. Talbot does what interstitial gingivitis means to general health? Would not a better knowledge of the conditions help both practitioner and layman? Can we reach a solution to these problems outside of medicine?

Tooth erosions, whether they are or are not associated with constitutional influences affecting the chemical composition of the saliva and mucous excretions, are yet a mystery, although Dr. Miller seems to think that tooth brushes and gritty tooth powder is in a large measure the causation. On the other hand, the efforts and the studies of Drs. Kirk and Michaels on the saliva point to physiologic influences rather than mechanical ones.

The care of the teeth of children should be directed toward anticipating not only destruction of the teeth themselves by decay, but also the influences of mouth toxins derived from pathogenic bacteria that find a home in the perfectly balanced culture media of the mouth. Dr. Brown wisely says:

> If the mouths of the children of our public schools could be systematically examined by competent persons and instructions given and enforced in regard to the use of brushes and antiseptic solutions, the death rate of this country would be materially lessened, and the percentage of illness reduced, and a stronger and more vigorous race would result in consequence of these prophylactic measures.

Greater knowledge of the tooth-developing stages with broader principles in controlling the feeding of children should claim the attention of the profession.

The question of medical education for dentists is undoubtedly in a condition of evolution and claiming the attention of a large number of the members of the dental profession. No one to-day, under the broadening influences that have gradually developed in the last decade, can look on dentistry as the same profession it was before that period. Not only has an enlarged field come under the immediate care of the dentist, but much in preventive medicine and dentistry is being accomplished.

The correction of deformities of the facial region is not alone confined to hare-lip and cleft-palate. Through the influences of orthodontia the restoration of features and of the functions of the dental apparatus are accomplished perfectly. Prophylaxis in connection with the study of the saliva, investigation of the local and general causes of disease and the way their effects are expressed on the teeth, and the study of the elimination of morbid salivary excretions, all are factors which are changing for the better the conditions of dental practice and are forcing the need for a broader education of its practitioners.

The medical side of the field of stomatology permits the student to look farther into the origin of diseases and thus more intelligently to fit the remedy to these disturbances.

Finger dexterity is requisite to the dentist. This should be combined with an analytical and constructive mind to correlate data in a usable form, and besides this the mechanical ability to construct. Thus, in my mind, a student who possesses dexterity with sensitive tactile ability which will enable him to differentiate shapes and tissue composition would under ordinary instruction be able to accomplish some fair technical results. The same individual having this faculty and in addition instruction in the general principles of medicine would far outstrip the student who is without a knowledge of the fundamentals that give him a working command of the otherwise hidden secrets of cause and effect.

The layman knows practically nothing of the interlacing influences between dental practice and medical subjects. When brought under the misfortune of some associated lesion, only then does he begin to realize that the teeth can directly or indirectly produce disturbances of the most painful and dangerous character. A knowledge of these possible conditions must be realized by the medical mind. He must realize that dental diseases may receive that intelligent care so necessary in other manifestations of disease and based on scientific conclusions so far as known.

The subject of medical education for dentists, so that it could be accomplished within the prescribed course of study, would require a reorganization of the plan of instruction. This probably could well be extended in its application to other specialties in medicine, i. e., one general school for fundamentals and a special school for each specialty, or otherwise the technical branch of dentistry would have to be obtained by an increased term in the college attendance.

The medical school, so arranged that the prescribed fundamentals could be given to the general members in attendance for the first two years, and special schools so arranged as to give prescribed studies directly relating to the life work of the student for two years more appeals to me as a solution that might be sufficiently broad to include the whole teaching in medical science.

The higher education of the dentist, it appears to me, must come through the study of general medicine.

DENTAL EDUCATION AND THE PUBLIC.*

JAMES McMANUS, D.D.S.
HARTFORD, CONN.

At all dental and medical meetings in the past the subject of education has had an airing; the methods of earlier days recalled and criticised and the work of specially gifted men extolled. These educational talks were no doubt sometimes tiresome and often interesting, for each speaker thought he knew what the word "education" meant. While professional, cultured and business men will differ widely in their views on the subject, the public has a belief that the man or woman that has the ability to do work easily, skilfully and satisfactorily is in his calling educated, and it is of little moment to the public whether the man or woman is highly educated or the reverse. What the public wants and seeks of the professional man and day-workman alike is the ability to do well and at a reasonable price the service required.

* Read in the Section on Stomatology of the American Medical Association, at the Fifty-eighth Annual Session, June, 1907.

While it is my belief that dentistry from the days of Fauchard in Paris, to the advent of Lemaire, Gardette and Hudson in this country, was truly a profession, the dictionaries of to-day define a dentist to be one whose profession it is to clean teeth and extract teeth, repair them when diseased and to replace them when necessary by artificial ones. Surely there is nothing in that definition that calls for an academic or scientific education or warrants the public in believing that the men or women following that calling are necessarily more than artistic mechanics. In all departments of labor a degree of knowledge with manual and technical training is absolutely necessary to gain the best results and, while a liberal education is of great advantage, it is well known that valuable time, energy and money are often frittered away where a misdirected course of study is pursued, and in over-training theoretically along lines not essential for the practical work of one's calling.

In all the large towns sixty years ago could be found one or more men that had given up bench and mechanic work to become dentists. The early use of tools had educated hands and eyes and the change to office life and surroundings gave opportunities to read and study. With little instruction these men were soon ready to extract, clean and repair teeth and insert artificial ones, and many of them were known as artistic mechanics and skilful operators. These men were known as dentists, for they attempted only what was considered dental work, referring the unusual or serious cases to the medical practitioner or surgeon.

A few of these men supported the college movement, assumed the duties of teachers and professors, and, while they did not always speak elegant English and quoted little Latin, they did teach students the principles and practice of dentistry, and later graduated men whose skilful work bore the "hall mark" and gained for American dentists honors in every civilized country. "Lest we forget," it is well to recall the early days and the men of those days and very seriously consider whether it is best to bar the sons of the poor from matriculating in a dental school for want of an academic or classical education. The name "dentist" has long been held in good repute, but for some years past the specialties advertised read strangely to the public, seeking for competent dental service.

The public may read daily in reputable as well as sensational newspapers questionably illustrated advertisements telling of the wonderful transformations that are daily effected by the skill of alveolar dentists, the orthodontists, the prosthetic dentists, crown and bridge workers, the porcelain and gold inlay workers. These are all specialties in the departments of artistic mechanical dentistry, and most of them such as makes it possible for a bright young man to become an expert at in less than three years in a private office under a competent instructor.

The claim—a true one—that dentistry is a specialty of the healing art has long been upheld by the old-time dental surgeon, the M.D. dentists, that date long before the degree of D.D.S. was thought of, the M.D.S., the L.D.S., the orist and stomatologist, all having more or less of a medical education and all assuming or claiming professional status. The dental surgeon, the orist and the stomatologist are titles self-conferred. The others, according to Prof. Horatio Wood, M.D., are "badges of partial culture." As the maker of that one phrase he will be remembered, for he, with the thinking public, knew that each and all of the titles given to and accepted by members of the medical profession, or, more broadly stated, members of the healing art, are neither badges of partial culture nor of broad culture. They all are simply parchment certificates given on the recommendation of the teaching faculties to students who have attended the courses of lectures prescribed by incorporated institutions of instruction.

Culture is a plant of slow growth—in bloom only after years of close study and earnest work; the world gladly honors ex-President Cleveland and Secretary Taft as men of broad culture. Institutions may confer titles, as they too often do, on men after they have accumulated vast wealth and who are apparently then forced into a lavish and not always a wise distribution of it. It is the man always and not the certificate, or, if you prefer, the diploma, that attains to the honor and right to be called cultured, and dental schools, comparatively yet young in years, have graduated a fair proportion of that class of men.

Previous to the enactment of state dental laws the public had reasonable assurance that dentists, who were members of their state societies, were not only capable but reputable men. In each state now a license may be granted by a political examining board, and that license will hold good only in the state where it was procured. In many states the university graduate owning an A.M., Ph.D., M.D. and D.D.S. and the output from a dental kitchen may go before a composite political dental board and, if a license is granted him, he is given equal status on the official list and certified to by that board as qualified to practice in that state alone. It is unfortunate for the public that the competent and the incompetent, the educated and the ignorant, the clean and the unclean, are given a like standing by state examiners.

The public is more clear and reasonable in its views regarding education, and how it may be and is acquired, than many supposed professional men, who criticise in season and out of season college teaching, training and text-books. The public looks on a college course as preparatory—the education is to come with the experience that is gained after years of study and practice. There are medical graduates in large number each year; only a few get hospital appointments and the rest go out and gain a practice as fast as they can. The number that take to surgery are few, and the public does not expect that every young doctor is fully competent to treat successfully all the ills, real and imaginary, to which flesh is heir. The spirit of the medical profession and the public toward the young doctor is kindly, and they are willing to give him a chance, and time sooner or later will determine the value of his education and develop his skill.

From the dental student and graduate much more is expected and less consideration shown. He early learns from dental journals that the colleges, teachers, text-books and training are not what they should be and that they are far below the ideal standard. He is expected, nevertheless, to learn medicine, surgery and allied sciences and to become skilful as an operator and an expert in all the departments of mechanical dentistry before he is graduated, and he must then pass another examination and perform a difficult operation before an examining board to get a license to practice in any of the states of the Union. In no other educational institutions are students expected to know and do so much before they are graduates as in the dental colleges, and when a few each year fail to pass state examining boards

the reading public is surprised and old practitioners wonder whether the fault is wholly with the student, the college faculty or the state examiners.

In all the colleges in the country the public believes that earnest, studious young men can surely get a good education and it is only that class of young men that should be advised to continue in a dental college. The years that have been wasted, the humiliation and sorrow that parents and friends have suffered, and the discredit to colleges all might have been averted had timely unselfish advice been given by teachers to students before the end of their first year's dental course. Educated Americans feel and express a just pride in the number and character of the dental colleges. They glory in the success of American dentists and American dentistry, and the public, educated and ignorant alike, know that what is considered at the present time a luxury in other countries, skilful dental service, with us is within the reach of the poor and at a slight cost.

The educational force for years, greater even than that of the colleges, was the dental societies. The public early realized what society work meant and kept in touch with the meetings where the old-time practitioner and the college graduate were united in their efforts for mutual improvement. The newspaper notices and reports, the papers read and discussed, the clinics given, and the distinguished teachers and operators from other states gathered on these occasions, forced the conviction on all interested that society meetings were surely post-graduate schools of instruction. As only reputable men —and all such were welcomed—were eligible to society membership the public felt assured that all on the roll of the societies were not only reputable but competent workmen.

Over forty years ago I was asked by a gentleman, a lecturer, author and publisher, when gold was first used for filling cavities in teeth. I had to tell him, shamefacedly, I did not know. Probably since then many thousands have been asked the same question and many others relating to dentistry that they could not satisfactorily answer. It is humiliating to thoughtful men, in any calling, to have to admit to cultured people that they know little of its history. In the office of my preceptor there were a few medical and dental books, but there was little in those books relating to the early development of dentistry.

During my college course, 1864-65, there was little said in the lectures about the early history of dentistry. The professors were so earnest and anxious to give thorough practical instruction that they overlooked the great need of and the benefit that would be gained by buying and cultivating the habit of reading professional books. For many years I have hoped for the establishment, in every dental college, of a lectureship on dental history and dental ethics, and so far as I can learn there are but few out of the fifty-two or more dental colleges that have such lectureships firmly established. You have all read the circulars and editorial notices in the dental journals of Dr. Guerini's "History of Dentistry," which the National Dental Association gladly accepted from him in manuscript form, ready for the printer, and which they believed the dentists of the country would be glad to see in print. The committee was assured that seven hundred subscribers would secure its publication, and for the past two years the committee of the associations has been working hard and the dental journals, most of them, have been giving up space for the circulars of the committees and editorials urging the dentists of this country and the world to subscribe to the book, and up to date they have not secured the required number. It is interesting to note that the list of subscribers, numbering now about five hundred, contains the names of the "old guard" that have sustained the journals and societies for thirty years past, and that the thirty thousand dentists, more or less, of this country seem to care little for either historical information or dental literature. The few that seem to enjoy criticising our literature and text-books might, if they studied the situation carefully, see why neither authors nor publishers care to give up much time to revising books or care to sink more money in new publications.

During the past year public interest has been aroused by the articles published in *Collier's Weekly* and the *Ladies' Home Journal* exposing the composition and dangerous character of many of the medical remedies and nostrums on public sale. The reading public should be made to realize how false were many of the claims made by the manufacturers and, if they buy, take these nostrums with a knowledge of the danger they run. One dental society a few years ago brought to the notice of its members the advertisements of nostrums published in the dental journals. All our societies have done good work in past years trying to educate the public, but I believe that the dental examiners, as custodians of the dental welfare, owe it to their official position to give the public valuable information and advice regarding the misleading and untrue advertisements in the newspapers, telling of exclusive and original methods of doing dental work, operative and mechanical, and in exposing the character and composition of the nostrums that these advertisers offer for sale. If the dental examiners of the country, at their next annual meeting, would appoint a committee to take the subject under consideration, and the committee would prepare a paper, stating facts to be given to *Collier's Weekly*, the *Ladies' Home Journal* and other newspapers, they would do a service to the public of incalculable benefit.

DISCUSSION

ON PAPERS OF DRS. SCHAMBERG, REGISTER AND MC MANUS.

DR. JAMES TRUMAN, Philadelphia, expressed surprise that Dr. Schamberg separated stomatology from dentistry, because the derivation of the word shows that it means a discourse on the mouth, or the conditions in the mouth, and certainly the different branches of dentistry have to do with the mouth. He felt that it would be a serious injury to dentistry to adopt the plan outlined in that letter from Paris and bring together all the stomatologists of the world and separate them directly from all the practical men in dentistry in the world. He thought any one who has ever practiced dentistry abroad would agree with him that the men who claim to be stomatologists are, above all others, the worst dentists. They are recognized as stomatologists, as pathologists, as men who have been educated in medicine and who are prepared to carry on the work as they understand it; but they are not dentists. Dr. Truman asked whether the time has come when the dentist of the future must be educated in medicine before he can practice dentistry, when he must be in the same position as the ophthalmologist and the otologist? If that is to be the state of things, then, he said, dentistry will practically be a dead profession. He is not opposed to the teaching of medicine and holds that the present training in dentistry given in the higher dental schools is practically the very best training that the dentist can get. He is brought along gradually in his studies, in connection with medical teaching, not primarily, as Dr. Schamberg intimated, but he is taught the fundamental principles of medicine along with the medical students until he reaches a certain point, and then he branches off into practical dentistry. He does not

become a medical man, but a dentist possessing a foundation of medical principles. Dr. Truman feared that a young man starting in medicine first, is bound eventually, when he gets through and takes his degree in medicine, to take up dentistry unwillingly as a rule. He takes it up as though it was something forced on him as a means of livelihood, and he does not take it up because he feels a great interest in it. That has been Dr. Truman's experience with all young men who have studied medicine first and then graduated in dentistry afterward. If a man graduates in dentistry first and then takes up medicine, it is altogether a different proposition. Dr. Truman holds that the man who is willing and ready to acquire the knowledge of medicine that is all-essential, is just as capable of doing it with the D.D.S. degree as with the M.D. degree. Dr. Truman asked what are degrees, anyway. Do they mean anything? Is the man who has an M.D. degree qualified for his profession, or the man with a D.D.S. degree qualified for his profession? It is known, he said, that they are not. It is a matter of study, of education, of continuous work throughout the life of any individual, if he wants to accomplish anything in the direction of his profession. Dr. Truman felt that although he did not have a medical degree, he is just as capable of talking on certain branches that he professes to know something about, as is the man who goes through a medical college.

DR. ALICE M. STEEVES, Boston, was reminded by this symposium of a similar symposium presented in this Section seven years ago. Things have changed somewhat since that time, she said, but the subject is still interesting to certain members of the profession. While Dr. Steeves agreed with Dr. Truman in many things he said, she asked how are we going to reach that stage? Dentists must, to a certain extent, have a medical education. She has found, in associating with dentists who profess to be strictly practical dentists, that many of them have a sad deficiency in medical knowledge. They are not sufficiently interested to work and study it up for themselves, and how are they to get it otherwise? If it is not a compulsory matter, a great many of them will never have it, and if they themselves have it not, then they are slow in seeing the need of it in others.

DR. E. S. TALBOT, Chicago, feared that Dr. Truman had been setting up a bundle of straw only to knock it down again. Every state has its dental society, and there are many local societies, as well as the national dental societies. Each of those societies is made up principally of men who practice the other side of dentistry, the mechanical side. The mechanics of dentistry has been hashed over and over again at every meeting for more than forty years. To such an extent is this the case, that the National Dental Association is going to pieces for want of new material, scientific research work, etc., and it is already hinted that the next meeting of the National Dental Association will be given over to clinics. No association, Dr. Talbot continued, can exist by making a one-sided affair, as dentistry has done at large; and that was the reason why this Section was started: to take up the scientific side of dentistry. There is no necessity for taking up the mechanical side in this Section. Some organization must encourage research work and bring out the scientific side of dentistry. How well that has been done, he said, is a matter of history. Dr. Talbot felt that the time has come when dentists must take some definite position in their profession. Research work in the last twenty-five years has shown that every pathologic condition of the human mouth dentists are called on to treat has a systematic origin, and the time has come when dental schools must either connect themselves with medical schools in such a way that general medicine can be taught, or the dental colleges must drift into schools of medicine. Dr. Talbot claimed that more than three-fourths of the dental schools in the country are simply schools of mechanics. The time is coming, he said, when dentists shall either remain tooth carpenters or have a medical education, so that we may be able to treat diseases of the mouth, such as erosion, abrasion, discoloration of the teeth, interstitial gingivitis, etc.

DR. E. A. BOGUE, New York City, agreed fully with what Dr. Truman said—that the stomatologists on the other side of the water are generally indifferent dentists. The efforts, however, that are being made by them this summer are worthy of notice. The schools of this country, which, Dr. Bogue thinks, are probably the best schools in the world, are yet so poor, he said, that a recent graduate of one of them told him that he had learned more in a few months' private tuition in the office in which he then was, than he had learned in his whole three years in college; in other words, so far as the practical side of dentistry is concerned, he had got nothing in the schools. Yet he had received a medal and had been made demonstrator the next year after his graduation. Dr. Bogue adopted Dr. Truman's idea when he put his own son through the colleges. He insisted on his graduating as a dentist first, and after that if he chose to graduate in medicine, so much the better. He did so, and Dr. Bogue considers him very much better qualified for the practice of dentistry than if he had turned it around the other way. There is another feature about this matter of medical education and dental education, Dr. Bogue continued, and that is that throughout Europe there is a prejudice against manual labor. It is, perhaps, stronger in England than elsewhere. A man who does not have to work is a gentleman, and the man who is a graduate from a school of learning feels as though he would a great deal rather sit at a table and write a prescription, than take his coat off and labor hard to preserve a set of teeth. If what Dr. Register spoke can be brought to pass, namely, insist on a general education in a medical school of men wishing to practice dentistry, and then let him receive a special education afterward, Dr. Bogue will be glad to see it done, but he is not ready to advocate that just yet. There must be some changes. He believes some of our present dental schools to be the best qualified institutions to prepare a young man to save teeth, but he asked, is that all that he should be called on to do? Dr. Bogue thought not. Dentists, as a rule, he said, have not been sufficiently broadly educated to draw them out of themselves. Dentists, as a class, are not drawn from the more highly educated circles of society in this country.

DR. TRUMAN W. BROPHY, Chicago, said that a short time ago a member of a large medical faculty made the statement that the graduates of dental schools are better prepared to assume the duties that they undertake than are the graduates in medicine, because the dental student's training along scientific lines is equally as good as is that of the medical student, and he has the practical experience in the work devolving on him as a professional man, that the students of medicine can not possibly get. Only the young physicians who have served as internes in hospitals can be compared in their usefulness to their patients with the students who have the advantage of long practical training in the infirmary of the modern dental school. Dr. Brophy expressed his interest in the subject under discussion, but feared that he could not add anything that would help the officers of the Section in carrying out their plans to make of dentistry an absolute specialty of medicine. He questioned whether such a step would be in the highest and best interests of humanity. If dentistry becomes a specialty of medicine, then the schools of medicine will have to be improved. At a meeting held at this session, it was decided that a large percentage of the medical schools of the United States are scarcely worthy of existence; that their grade is so low that it is really felt they should be discouraged from going on. To teach a student how to become a skilled specialist in medicine from a dental point of view, the dental and medical curriculum would have to be revised. One can not learn how to treat the diseases of the human teeth in a medical school, because the medical schools, with a few exceptions, do not teach dental pathology. The dental specialist who would acquire his knowledge in a medical school would be disappointing as a student, since the curriculum of the medical school gives little attention to diseases of the teeth and to those diseases which have their origin in the teeth and which are dependent on the teeth for the initial lesion. To establish a condition of things, such as prevails throughout Europe, of making dentistry a specialty of medicine, on the ground that every medial man is a dentist, such is the law in Europe, would, in Dr. Brophy's opinion, be a calamity to the

dental profession and to mankind. He did not consider it necessary to call attention to the deplorable condition which prevails throughout nearly all Europe, regarding dentistry. Too well, the earnest advocates of dentistry in Europe know the troubles that surround them at the present time. In Paris, in 1900, there was a great International Dental Congress, which was attended by over 1,200 dentists. In the International Medical Congress held at the ame time there was a Section on Stomatology, and the general attendance at any one time was from 80 to 120. Which of those meetings, he asked, contributed the most to the fundamentals of the science and art of dentistry? He held that there is a misconception in the minds of many as to what is medicine. Chemistry, he said, is not medicine; anatomy is not medicine, and physiology is not medicine. Anatomy deals with the whole subject of the structure of plants, of animals and of man. How much, he asked, does the student of medicine know about the anatomy of animals and the anatomy of plants? He has a little anatomy—the human anatomy. In physiology, it is the same way. He has the human physiology and not the physiology of vegetation, which is a part of physiology. Chemistry is a science. It has no more to do with medicine than with geology or any other of the sciences, or pharmacy, which is, in a way, a part of medicine; yet the pharmacist is not regarded as a medical specialist, nor could he receive admission in such associations as the American Medical Association, though he comes nearer being a medical man than the dentist, as he prescribes more frequently for people than do some of the physicians who send their prescriptions to him to be filled, and so he is really practicing medicine. Medicine is said to be the healing art in all its branches. This is not true, he said. It does not deal with the healing art which applies to dentistry. An examination of the curriculum of the medical schools would fail to reveal any reference to the teaching of the healing art as it applies to dentistry, with some general exceptions. Dr. Brophy said that it has been stated that the degree of D.D.S. represents a partial culture. That was said by a medical man. If there is any degree that represents partial culture it is surely the degree of M.D. It is only a partial culture, because the man who graduates in medicine in many instances has only a smattering of the things he has studied and has not become thoroughly acquainted with them. There is not any degree that represents a high state of culture. All degrees represent a partial culture. If, he continued, what the chairman in his enthusiasm so carefully outlined were to come to pass, we must not only revise the curriculum of the schools of medicine, but also dispose of all the state dental boards, and if the boards of health take care of all candidates for admission to practice, who will say they are fit to examine the candidates as being capable of engaging in the practice of dentistry. A state board of health is no better qualified to determine whether an applicant is qualified to practice dentistry than a dental board is to decide whether an applicant is qualified to practice medicine. Dr. Brophy predicted that the time will never come when about one-fifth of all that enters into the duties of dental practice, the medical part, can be regarded as most essential. He would classify the curriculum in this way: Chemistry, anatomy and physiology are sciences in themselves. Orthodontia is a department of surgery that medical schools never teach, but which would require any man, no matter how skillful he might be, or how well qualified, or how well educated he might be, to give two years' time at least to become proficient in its pratice. Operative dentistry is the greatest, including inlay work, porcelain work and bridge work. These are not medical subjects and it is not consistent with the course of training in medicine to undertake to teach anything of the operative side of dentistry. Porcelain work in all its wonderful forms and shapes and methods of development must stand out prominently as part of the work of the dentist, and it is not consistent, it is not logical, to assume that the dentist's art ever can be taught in a school of medicine. If medical schools will teach the students how to recognize diseases, so that the man who goes out to practice medicine is able to take care of his patients who have the diseases that have originated in the teeth and those which are intimately associated with them, and treat their patients properly, a great work will have been done. But, Dr. Brophy continued, to teach the art of dentistry in a medical school would be impossible. The dental student must learn the handling of the materials that are employed in dentistry; the medical schools can not teach what their curriculum does not provide. Dental pathology, so far as it refers to general medicine, should be taught in all medical colleges. Dr. Brophy said he hoped the Section will carry out the suggestions of the chairman, and that the schools of medicine throughout this country, when they come up to a standard that will be approved by the state boards, will teach dental pathology.

DR. M. I. SCHAMBERG, New York City, was pleased to have heard this subject discussed from both standpoints, for the reason that the Section has been accustomed to viewing these subjects entirely from the standpoint of a man who has a medical degree combined with a dental degree. What does that mean? he asked. That there is something more in dentistry, or rather stomatology, than is ordinarily supposed? It is surprising, he continued, to find the opposition on the part of men associated with medical institutions and hospitals. They are willing to concede the filling of teeth to the dentist, but they do not believe he is fitted for the treatment of the various diseases of the mouth and the soft tissues of that cavity. It is very humiliating, he said, even to one who has both degrees, to find that they feel that because a man has a dental degree coupled with a medical degree, he is less fit to handle these diseases than a man who has an M.D. degree alone. Nearly all serious cases of alveolar abscess, and suppurative conditions of the face and neck drift into the physician's office, when they could be treated more properly by a dentist. Why? Because patients fear the dentist is not able to cope with the condition from what might be termed a medical or surgical standpoint. Dental students, Dr. Schamberg continued, get an excellent training in oral surgery. At the present time there are very few of the better colleges that do not endeavor to teach oral surgery, the elemental subjects of bacteriology and pathology, up to the major operations for resection of the jaws, and still when a dentist asks for material in the hospitals, he not only fails to get it, but he would not be permitted to perform the operation, even if he knew how. His degree does not cover that. He is a dentist; he is not a physician. Dr. Schamberg pointed out that the dental profession must either be satisfied to cope with the filling, the extraction and the restoration of teeth, and end there, or dentists must become stomatologists in the true sense of the word and be able to cope with all the conditions of the mouth. He is convinced that a more thorough study of this subject would show that many of the conditions of the mouth are an index of the general condition of the patient. At the present time dentists are able to make a diagnosis of Bright's disease or tuberculosis, in their incipiency, long before there are evidences of these diseases in the other organs. Why, then, should they not be able to prescribe for and treat such patients, if need be? The only way that that will come about is by the dentist taking the full medical course first. Some dentists consider themselves specialists in medicine. They will not be specialists in medicine, he said, until the entire profession shall consider the taking of the medical course as essential, prior to taking up the special course in dentistry. At the present time, any medical man who practices dentistry, does it, not because he is proud of the new profession he has stepped into. He does not select it because of its importance, but merely because he feels that it is a profitable field, and such men are of little value in any specialty. Dr. Schamberg asked another question in connection with the advance of dentistry to the present time: Has dentistry suffered so much because men are given a partial medical education in the elementary subjects? Has dentistry been injured because men formerly accepted dentistry as orthodontia because they were mechanically inclined? No, he said. Advance in mechanical directions has made it possible for dentistry to systematize certain work, make it easier, and, at the same time, do the work just as efficiently. The inlay of to-day makes it possible to insert a filling of far greater value and one which requires far less

skill than the gold filling, and there will be other systems, as well as the system of orthodontia, in which men have been able to go and take this course for six weeks or several months and come back very well able to cope with irregularities, and so it will be. It will be through systems of that kind, which will make possible the mechanical side of dentistry. That will take care of itself. Even though dentists should lose a little, in a mechanical direction, they can afford to do it. They can afford to do it for the sake of what will be gained through research in the true medical direction. Dr. Schamberg feels confident of that, for the reason that dentistry requires a course of study, instead of the old method of spending years in the office of a preceptor.

HEADACHE AS A SYMPTOM OF LOCAL DISORDERS.*

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"Nothing could be less scientific than the establishment of a hierarchy among medical problems based on the relative severity of symptoms. Prognosis apart, there can be no division of diseases into major and minor. It is the outcome of ignorance to relegate any symptom to a secondary place, for we forget that difficult questions are often elucidated by apparently trivial data." The sentences we have just quoted are from the introductory paragraphs of Professor Brissaud's preface to Meige's and Feindel's interesting work of "Tics and Their Treatment." (English translation.) They express what we have often thought in regard to the commonplace subject of headaches.

We propose in this paper to consider only headaches in which the pain in the head is the sole, or at least principal, complaint of the patient. It is based on analysis of over 1,700 cases collected during the past fifteen years which have been personally seen and studied by at least one of us.

In studying cases of chronic or recurrent headaches it is always our first endeavor to obtain the most precise description possible of the location of the pain, its character, time of occurrence, duration, spots of tenderness in head, and the immediate cause of the individual attacks, where any have been observed. We have then proceeded to make the most complete examination of the patient's physical condition and past and present history that time and opportunity permitted. The most important points in such an examination are:

1. The family and personal history as to evidence of neurotic tendencies, worries arising from business and family troubles, or a nerve-tiring occupation.

2. The habits as to care of the bowels, diet, the state of the digestion, the menstrual function, the use of tea, coffee, tobacco and alcohol, bad air, the practice of sexual excess or masturbation.

3. A physical examination as to the reflexes, as far as they indicate an irritable weakness of the nervous system, the heart, the state of the blood vessels and pelvic organs, the character of the urine and the blood, the eyes, nose, teeth and ears.

The principal conclusions at which we have arrived from this study are: 1. That a neuropathic diathesis is an essential condition of the occurrence of almost all chronic headaches of the kind we are discussing; the only exceptions to this rule occurring in patients where the other causes we are about to consider exist in unusual severity. 2. That the great majority of cases have, in addition to a neuropathic diathesis, some source of local irritation to the nervous system which often manifests itself in no other subjective symptom. 3. That a minority of cases, though still a considerable number, are suffering from anemia, or a toxemic condition, which, as before, occurs in a person of neuropathic diathesis, and may manifest itself in no other subjective symptom of importance. 4. That the more marked the neuropathic tendencies, the less need be the degree of local irritation, or toxemia, and vice versa. 5. That in some cases, often the most severe ones, a local irritation of the nervous system is reinforced by a toxemia. And 6. That there are a considerable number of what we may call composite headaches in which two or more local irritations combine to intensify the sufferer's neuropathic tendencies and to cause headache.

LOCATION.

We have found the location of the headache the most useful single symptom in pointing out its cause. The classification of locations which we have adopted is: 1, frontal; 2, temporal; 3, occipital; 4, vertical; 5, parietal; 6, circular, in which the pain is described as resembling a band surrounding the head; and lastly, 7, general headaches. It is also very common to find combinations of one or more of the first five locations which we have enumerated. For example, the vertical-occipital headache, due to retroversion of the uterus, with endometritis. These when complicated are often mistaken for true general headaches. Moreover, any headache when very severe tends to become widely diffused. Its true type in such a case is often indicated by the region of most marked tenderness to pressure, or still more clearly by the location in which the pain began.

None of the indications to be drawn from the location of the pain are absolutely invariable, as will be seen by a study of the tabulated cases. All that we would insist on in regard to the location is that it is the most important guide in the patient's description of the probable cause. There are few cases, however, of any severity in which the whole of the examination which we have mentioned should not be made. Much of the doubt and uncertainty as to the causation will be found to be due to the incompleteness of the general examination of the patient. The more one persists in looking for causes in the eye, nose and pelvic organs the more frequently will he observe cases in which the typical headache of derangements of these organs will be found the only subjective symptoms of disease. On the other hand, if our interest in the local irritations blinds us to the important fact that they rarely cause headaches, except in the neuropathic individuals, or renders us forgetful of the possibilities of toxemia or anemia, our results will not be perfectly satisfactory.

Some indications, apparently pointing to one system of organs as the source of headache, may be very misleading, e. g., the headache occurring only at the time of menstruation is by no means necessarily due to any derangement of the pelvic organs. We should never forget, in studying any symptom that comes on at the menstrual period, that the most normal woman is more inclined to be nervous at that time, and that the resisting powers of the nervous system to all kinds of strains is lowered. We have seen purely eye-strain headaches which occurred only at that time.

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The local irritations which cause headaches are approximately in the order of their frequency:

1. Irritation of the eyes, which may be due to astigmatism, muscular imbalance, hypermetropia, or its opposite, reinforced in cases of long standing by the irritability of the retina which they have produced. Of course, more than one of these conditions may be present in the same eye.

In these cases the pain is either (*a*) frontal, usually due to astigmatism; (*b*) occipital, often from muscular imbalance; (*c*) temporal, from muscular imbalance or hypermetropia; (*d*) or deep-seated in the eyes themselves from irritability of the retina. They are usually bilateral in simple astigmatism, but may be, especially the temporal headaches of muscular imbalance, unilateral. The pain may alternate from one side of the head to the other in successive attacks or during the same attack. They are often accompanied by nausea or vomiting, and, of course, depend much on the occupation and age of the patient. They are more apt to occur at times when the patient's nervous strength has been subjected to some special tax, such as menstruation, pregnancy, a long illness, loss of sleep, or merely an especially tiring day's work.

2. The nose and accessory sinuses: adenoids, polypi, hypertrophied turbinates, spurs, infection of the frontal sinuses, or the antrum and, sometimes, deflected septa.

In these cases the pain is usually frontal, more often than in eye-strain confined to one side of the forehead, and frequently, unlike the pains of eye-strain, the pain is limited to a small, well-defined spot, sometimes in the median line directly over the root of the nose, or on either side of this line in the lower part of the forehead, or higher up just inside the line of the hair. These are particularly apt to be morning headaches, especially in mouth-breathers, and to wear off with the more normal respiration of the waking hours, or with the better draining of the infected cavities when the patient is in an erect position. The pain is often of a duller and more deep-seated character than that of eye-strain. It may be complicated by a headache due to esophoria where the esophoria is a reflex due to the nasal disease.

3. The pelvic organs in women: retrodisplacement of the uterus, posterior parametritis, endometritis, polypi, subinvolution, sclerocystic ovaries, prolapsed ovaries, and perhaps ovarian irritation from adhesions. The pain is almost invariably vertical in cases due to diseases of the body or lining of the uterus, as in endometritis, subinvolution or polypi, and with equal certainty occipital when due to retrodisplacement of the uterus, posterior parametritis or ovarian disease. The pain in the latter situation is much less likely than the occipital headache of eye-strain to extend down into the neck and upper part of the back. These headaches are practically always bilateral. They are often worse about or during the menstrual period, but are not very infrequently characterized by cessation during the menstrual flow. The occipital headaches of uterine or ovarian displacement are often aggravated by walking or standing. They may be complicated by temporal or occipital headache due to exophoria, which is in its turn a reflex from the pelvic displacement.

4. The stomach: hyperacidity, deficiencies of the normal acid, the presence of food entirely undigested from any cause. These headaches are practically always frontal and bilateral, and are more commonly situated in the upper part of the forehead than those due to the eyes or nasopharynx. When such a headache is due to the presence of undigested food remaining in the stomach it is readily relieved by vomiting. The occurrence of the pain soon after eating, or about the time that the latter stages of gastric digestion have been reached, is characteristic. It often occurs too soon after the ingestion of irritating food to be fairly attributable to the absorption of poisons into the blood.

5. The teeth: the irritation of decayed teeth, almost always in the upper jaw, and especially of the third molar or eye-tooth. They are usually temporal when the molars are the principal cause, or frontal especially in the case of the eye-teeth. As might be expected from their origin, they are frequently unilateral. We have seen a few cases where all the teeth of the upper jaw were in bad condition, where the pain was very diffuse and persistent, covering the whole of the forehead, temples and vertex. Occasionally, especially in disease of the third molars, the pain is confined to a small spot on one or both sides of the occiput.

6. A few cases due to the ears. These are almost the only parietal headaches due to local irritations and are unilateral or bilateral as one or both ears are involved. They may be due to the mere presence of wax adherent to the drum or to stoppage of the Eustachian tubes. They are rarely due to disease of the middle ear when unaccompanied by obvious local symptoms.

The characteristic headache in anemia is vertical, and is frequently accompanied by other morbid sensations, which the patient often describes as fulness and pressure in the top of the head, or as a feeling as if the top of the head would come off. The toxemic headaches are most commonly described as involving the whole of the upper part of the head, or as a band of pain encircling it accompanied by the sensation of pressure or constriction. The pressure of a too tightly fitting shirt band or collar around the neck may also give rise to very severe and persistent general headache closely resembling that of toxemia due to constipation, bad air, tobacco or coffee. The time of occurrence of toxemic headaches has frequently some relation to the absorption of the poison, e. g., the evening headache in a man who has been smoking too much all day, or the morning headache of the one who has spent the night in a badly ventilated room. In our experience the headaches due to the presence of some of the purin bodies in excess of the blood are more apt to be paroxysmal in the attacks than in the case of other toxemias, and rarely occur except in close connection with the presence of an extreme reflex irritation in the eyes. Another type of toxic headache is that where the area of pain exactly corresponds to the distribution of some nerve in the head, occasionally the occipital, but much oftener the supraorbital branch of the fifth. When very severe the pain in the latter case may involve the ball of one eye and the root of the nose on the same side, and the pain may be so definitely ocular in location as to make the patient himself sure that it is due to the eye. When noticeably periodical, occurring every day or every other day at about the same hour, we have occasionally been able to prove by examination of the blood that these attacks were malarial, and one can almost always obtain a history of malaria in the past. They yield readily to quinin if used in the same way that it would be for chills and fever. The headache of arteriosclerosis is very commonly occipital and may be general. The age at which it makes its appearance is often suggestive of its origin, which may be confirmed in most cases that are not very advanced by the therapeutic test of relief by the use of nitroglycerin.

MIGRAINE.

We have reserved the subject of migraine for special discussion, because our views, though by no means novel, are generally regarded as heterodox by students of nervous diseases. As a result of conscientious study of the whole subject of headaches during the past fifteen years we have been forced to abandon the common conception of the disease with which we started out.

We have come to regard the classical type of migraine as a headache due to the presence of a local irritation, practically invariably eye-strain, in an individual of markedly neuropathic diathesis in which the immediate occurrence of the attacks may be due to the special irritability of the nervous system, caused by transient but frequently recurring conditions of toxemia, which in a less neurotic individual or one who was not constantly subjected to the nervous wear and tear of the eye-strain, would be incapable of producing any such effects. The numerous peculiar cases with more psychical symptoms than the merely hysterical tendencies of a neurotic patient could account for, or those complicated by more or less transient paralysis of various ocular muscles, differ in so many respects from the typical cases and also among themselves that we fail to see how they can all be classed under one disease.

To regard all the severe recurrent headaches as a single affection, without regard to their causation, seems to us as unscientific as it would be to treat all cases of chorea or choreiform movements, from Huntington's chorea to habit tic, as one disease. That which follows is intended to apply only to what may be described as a common typical migraine.

Migraine may be described as a severe form of headache occurring at more or less regular intervals, often, though not invariably, unilateral, especially severe in the front of the head, forehead and temporal region, but extending when at its height over the whole head or one-half of it, alternating at times from one side of the head to the other in successive attacks, or even during one attack, lasting from twelve to twenty-four hours, though it may last longer, for several days, or a shorter time, only three or four hours, usually accompanied by more or less disturbance of digestion, and often ending with vomiting. The attacks sometimes terminate by the patient falling asleep to awake the next day entirely relieved. Where it does not reach a crisis by vomiting or sleep it is frequently noticed that the pain seems to wear off about sunset. Victims of these headaches are invariably of a neuropathic constitution and the disease is markedly hereditary. It comes on most commonly in childhood or at puberty and invariably, as far as our knowledge goes, fades out when the patient reaches the age of about fifty. The attacks are often preceded by prodromata, usually ocular, often accompanied by paresthesias of the neck, arm and even trunk, especially on the same side as the headache in the true hemicranial cases. They are often connected with epilepsy in a way that has suggested the possibility of a similarity of nature in the two diseases.

The etiologies suggested for this disease are sufficient evidence by their variety, and in many cases their unpracticable character, of the difficulty that the neurologists have generally experienced in explaining it. Many of the best authorities on nervous diseases lay stress on reflex irritation as the cause. The two factors which have been most emphasized have been heredity and some form of autointoxication. It is perfectly true that there is a marked hereditary element in migraine, but these cases are simply among the most violent and regularly recurrent of the headaches which we have already analyzed, and we have stated in the beginning that a more or less neuropathic tendency is characteristic of almost every individual who suffers from recurrent headache. A neuropathic diathesis is, of course, strikingly hereditary. It should also be remembered, as pointed out by Risley in a paper read before this Association in 1899, that there are few points about the structure of the body that are more certainly inherited than the shape of the head, and that the shape of the socket of the eye ought to partake together with the rest of the head of this transmissible character, and finally that the shape of the socket may have a great deal to do with peculiarities in the shape of the eye. All that has been said, therefore, of the manner in which the disease can be traced in one generation after another in the same family, or in all of the children of one of its victims, is perfectly true. But it is far from proving that such headaches really constitute a disease *sui generis*. The usual ages of onset and disappearance of the disease is very suggestive of a different explanation. The disease rarely makes its appearance until the child is of school age, very frequently only with the increased strain on the nervous balance of puberty. And, what is very curious, if the disease is principally due to faulty metabolism, is that it invariably disappears at about the age when the victim's vital functions are beginning and his liability to autointoxication from a weaker digestion, from less vigorous action of the organs of excretion, from an impaired circulation, markedly increasing. It seems to us that a candid consideration of this one point of admittedly invariable disappearance of the disease at or about the coming on of old age is sufficient to render untenable any explanation which bases itself principally on the theory of autointoxication, whereas the age of disappearance can only be explained by assuming that it is dependent for one of its essential factors on some condition which is known to cease to exist at about that time of life. It is very hard to name anything which fulfills this requirement except the power of accommodation in the eye. Migraine disappears just when the patient ceases to be able, by any effort on the part of the muscles of his eye, to correct or accommodate for the errors in its structure. We have still to see a case of migraine that exists in an individual with no muscular imbalance and no more than the physiologic amount of astigmatism, and we have seen case after case of typical migraine completely cured, though often with much difficulty, by a sufficiently careful correction of ocular errors. We should not be understood, however, in saying this to go quite the length of some ophthalmologists who regard migraine as due simply and entirely to eye-strain. In practically every form of headache we have, to use a mathematical metaphor, to regard the disease as a product of several factors, a lack of resisting power in the nervous system, which is about what a neuropathic temperament amounts to, and secondly, some toxemia or some reflex strain due to local disease. Migraine may be regarded as a headache in which the neuropathic factor is larger than in some others, in which the factor due to local irritation is, however, an essential one, and in which, to continue the same metaphor, the product of suffering is increased, at least in most cases, by multiplying these by a third factor, that of autointoxication. We can not cure all cases of migraine immediately by fitting them with glasses, but the best possible correction of the irritation from the eyes will, in our experience, lead to

the ultimate disappearance of the symptoms. It is true here, as in mathematics, that if you can reduce one factor to zero your product will be zero. It seems to us that this is a less radical view than has been taken by many ophthalmologists. It does not ignore the neuropathic and possibly toxemic factors, but it also refuses to ignore the immense importance of the eye and proposes to treat the disease by eliminating the most easily treated essential element in its causation. It is, of course, true that everything in the way of improving the patient's general health by wise diet, plenty of out-door exercise, and the greatest possible care to maintain the functions of excretion through skin, bowels, kidneys and lungs, at their best, and tonics to improve the general health, will all lessen the neuropathic and toxemic factors and may in this way be of great benefit. They should never be neglected, but the very cautious way in which the eminent authorities who have advocated them as the only means of treating migraine speak of the possibility of a complete cure by such methods, is in itself a pretty good proof of their inadequacy where employed alone.

EXAMINATION OF THE EYES.

We have spoken of a "careful examination" of the eyes and it may perhaps be worth while to explain what we understand by a careful examination. The proper examination of the eyes for the correction of reflex symptoms either in the form of headaches, indigestion or "general nervousness" must be made very differently from the examinations of some otherwise excellent ophthalmologists. In the first place a mydriatic must be used. In children atropin is much better than homatropin, and at least homatropin should be used up to the age of 55. Moreover, the mydriatic must be used thoroughly. Its effects are obtained with incompleteness in too many cases. It is much safer for the ophthalmologist to put the drops in the eyes himself at his office. This requires much more time for the patient to wait around the doctor's office and somewhat more time from the doctor, but it is a point of essential importance in the more difficult cases. The most exact determination of the axis, as well as the degree of astigmatism in each eye, is essential. We always distrust a prescription, of which one sees too many, in which the axis comes out in a nice round number of degrees and the same for both eyes. It can not be too much insisted on that small degrees of astigmatism are just as likely to lead to reflex symptoms, though much less likely to lead to defective sight, as the extreme ones. The findings on the reading tests with different lenses must in every case be carefully verified by the shadow test. The patients should be told plainly that there is no use in wasting any money on glasses if they are not prepared to wear spectacles, moreover, if they are not prepared to wear them from morning till night. The patients should invariably be instructed to bring back the glasses to the ophthalmologist before the marks which the opticians use for centering the lenses are washed off, that the doctor may himself see that they are centered correctly. The patients should be told to return frequently to the optician and have the glasses readjusted, in case their frames or bows become bent. They should be particularly instructed how to take off and put on the glasses, holding them by the bows on both sides to prevent distorting the frames. Women especially should be cautioned to see that they do not catch a loop of their hair under one bow of the glass, thereby entirely altering the relation of the axes of the cylindrical lenses to their eyes. For persons engaged in an occupation requiring much close use of the eyes ophthalmologists should be more careful than they usually are to see that the lenses are set at a proper angle to the eye, that is, so that when the patient is looking down at her sewing or writing she will not be looking through the very lower edge of the lenses and that at a decided angle to its surface. The toric lens overcomes this difficulty to a great extent. If there is any evidence of retinal irritation at the time of examination, the first pair of glasses at least should be amber tinted. The same minute attention should be paid to details in the examination and treatment of the nasopharynx and pelvic organs.

We venture to say that most neurologists who are skeptical about the importance of the eye as a factor in migraine and many other less severe forms of headache have failed to give this much consideration to the details of the oculist's treatment, but if we do not pay unremitting and exact attention to all these minutiæ we shall continue to see cases of migraine that are not due to the eyes.

We would not be understood as confining all treatment of headaches to the removal of local irritations or the elimination of poisons, although we believe this to be the most fundamental part of the treatment. Any tonic treatment directed to the general health, especially to the removal of the anemia, the improvement of digestion and the functions of excretion, and above all, everything tending to the improvement of the nervous tone and mental condition, should prove of the greatest value, but such treatment ought by no means to be confined simply to drugs. General massage is of special value in the toxemic cases, and local massage to the head and neck is often of great use in relieving the individual attacks. Medical gymnastics and all kinds of rational out-door exercises should be strongly recommended. To the ordinary kind of exercise in a gymnasium we would attach much less value. The gymnastics should not be attempted unless they are carried out under the care of an experienced masseur and medical gymnast, who at the same time realizes the limitations of his functions and takes his orders directly from a physician. Cold bathing in the form simply of friction by the means of rough bath mittens wet in cold water (ice water if the patient will stand it), followed by a vigorous rub-down, the drip sheet, the tonic bath, are all of use in properly selected cases. We have found the employment of vibration, vigorously and thoroughly over the thoracic region of the spine and the hepatic and splenic areas, of decided benefit in some cases of toxemic headaches. General faradization with mild currents, and prolonged wave current treatments with the static machine, are of great value, especially in the toxemic cases, and the latter wherever the patient is very neurotic. The positive breeze from the static machine applied to the head gives great relief to the attacks in many cases. The most universally good effect of this treatment, and also of local massage designed to reduce congestion, are confirmatory of our impression that in practically all headaches, except those which are a distinct neuritis, whatever the primary cause, the immediate cause of pain is congestion. This we believe to be true even in anemic headaches. Of tonics, strychnin in some form is enough in many cases to stop the recurrence, at least for a time, of some forms of eye-strain headache. Iron is, of course, indicated in the anemic cases and, we believe, in many others. The proneness of those subject

to headaches to develop them from taking iron is well known. In cases where Blaud's mass, the chlorid, citrate or dry sulphate of iron cause any increase in the symptoms we usually administer the lactate, which we have found much freer from unpleasant effects in headache patients. We have met with little satisfaction in the use of the many and much vaunted forms of so-called organic iron. Arsenic in the form of arsenate of soda is less irritating to the stomach than Fowler's solution, or if combined with mercury in the form of Donovan's solution is of the greatest value in many obstinate cases, especially of the more severe types. In headaches involving the distribution of the supraorbital, or of any other definite nerve in the scalp, we have found great benefit and often permanent cure from the systematic use, up to the point of toleration of each drug, of two grains of quinin sulphate and 1/400 of a grain of nitrate of aconitin given every two hours in separate tablets, so that either can be discontinued on the appearance of the appropriate indications.

In some cases of migraine, especially where exophoria was present and the pain principally in the temple or occiput, we have found marked benefit from the use of cannabis indica in from 1/8 to 1/4 grain doses of Hering's extract three times a day continued for a long period. In the matter of drug treatment the same attention to details is of importance as in the fitting of glasses. The physician who prescribes such drugs as aconitin, cannabis indica or ergot without the most careful supervision of their quality will constantly be disappointed in the results.

The importance of the toxic element in the immediate bringing on of an attack of migraine is well illustrated by the best methods for aborting the beginning of the attack. Thorough lavage of the stomach, followed by the administration of salicylate of soda or aspirin combined with a good dose of caffein, or, still better, given in strong black coffee, has proved of more service in our hands than any other treatment when the attack first begins. Another resource when the pain is principally frontal is spraying the nose with a very strong, say 20 per cent. solution, of cocain. The character of the drug should be unknown to the patient. When called to a case in the midst of a violent attack of any kind of headache, which is well under way, we do not hesitate, if we are fairly well satisfied that it is due to an ultimately removable cause, to administer a hypodermic injection of morphin with atropin and to repeat it if necessary until the patient is comfortable. In a severe headache, which has already lasted for a couple of hours, we are convinced that even where there are no particular gastric symptoms the stomach is in such a condition with the majority of patients that any drug put into it is simply wasted as far as relief is concerned, and many of the unpleasant results of using the coal tar products have been due to the administration of repeated doses under these circumstances, where no relief was obtained until the headache began to go off of itself, and then all the successive doses were apparently absorbed about the same time. Where one does decide to make use of the coal tar analgesics, antipyrin has seemed to us much the safest and as efficient as any other. We always guard it with caffein, and the same effect will be obtained from a much smaller dose if the drug is administered in an effervescing form. The hard compressed tablets, so commonly in use, dissolve with greater difficulty than many realize, and a powder is much preferable where an effervescing salt can not be used.

DISCUSSION.

DR. WM. HEALY, Chicago, has seen cases in which, although no correction of vision was needed, reduction of the amount of eyework brought about cessation of the pain. On the other hand, in cases in which refraction was done by a good man and even corroborated by another, there were frequent recurrences of the headache until there was a decided reduction of the work done by the corrected eye. Eye-strain which causes headache may, he said, be either use of eyes which refract imperfectly or it may mean merely overuse.

DR. HUGH T. PATRICK, Chicago, speaking of the relation of migraine to eye-strain and the relation of eye-strain to migraine said that the author's results in the treatment of migraine by the adjustment of glasses have been very much more fortunate than have his. Every case of migraine that comes to Dr. Patrick is at once sent to a competent oculist, provided an eye examination has not already been made. Ordinarily the eyes have been attended to before he sees the patient. But the cases in which the migraine has been cured by the adjustment of glasses are of the extremest rarity in his experience. This is, of course, assuming that the headache is really migraine. The single element of heredity, Dr. Patrick thought, would throw some light on his poor results, because in the cases he sees the element of heredity, not only indirect but direct heredity, is of surprising frequency. The fact that the patient has what she calls sick headache, that her mother had what she called nervous headache, and her grandmother had what she called neuralgia, does not alter the fact that all three had migraine, and, if that fact is taken into consideration, there will generally be found somewhere in the family a history of migraine. Dr. Patrick inclined to the belief that some of the men who get such very brilliant results from the adjustment of glasses in migraine are not dealing with typical cases. Heredity also plays an important part in the production of the refraction errors, and that parents with errors of refraction are very apt to have children with errors of refraction, but, nevertheless, Dr. Patrick does not believe that cases of migraine are cured by the adjustment of glasses, at least not in the proportion mentioned by the author.

TRICHOPATHOPHOBIA.

FEAR OF DISEASE OF THE HAIR.*

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The subject of the pathophobias is such an extensive one and so particularly within the scope of neuropathology that my object is simply to classify those pertaining to the hair and to speak of some of the diseases of the hair and scalp giving rise to them. Under the term trichopathophobia, from θριξ hair, πάθος disease, and φόβος fear of, I wish to include all those cases of mental worry in regard to the hair, such as: Worry over the loss of hair or over the hair falling out; worry over the color or change in color of the hair; worry over a change in characteristics—brittleness, kinkiness, lack of gloss, etc.; worry over excessive growth in unusual places—hirsutes, hypertrichosis; worry over the failure of hair to grow where it should.

THE FEAR OF THE HAIR FALLING OUT.

The rôle played by the hair as a fetich of sexual attraction is so well known as to be consciously or unconsciously employed by both sexes. In the lower animals it is the male who parades his hirsute adornment as a means of sexual selection, and in savage races it is even

* I wish to thank Dr. Achilles Rose, well known for his writing on medical onomatology, for his interest and assistance in selecting the word "trichopathophobia" to describe these conditions.

to-day the male who most adorns his head dress. Civilized man has relegated this form of vanity to the female sex, although he is not entirely free from hair vanity, especially facial hair vanity.

The greatest number of cases of hair-worry is in women, and this is quite natural under modern conditions which makes them, as Bernard Shaw says, "superman" as regards sexual attraction. Hence the enormous amount of time and thought which women bestow on the arrangement and care of the hair. This is excusable on psychical grounds much more profound that simple vanity. The anxiety of a nervous woman at the loss of her hair is not at all reassured by the indifferent or stereotyped explanation of the physician that each hair has a definite growth, falls and is replaced by a new hair. Such women continue to worry until their anxiety in keeping daily count of the number of hairs lost at each combing may increase until it becomes a veritable obsession.

This worry, of course, is most marked in neuropathic women, but, since urban conditions are so trying to nervous stability, it is very common in society women. Women leading lives of social calls, teas, theaters, card parties, balls, late suppers and that constant *surmenage* which so often results in an enforced sojourn in a sanitarium. The following case may serve as an illustration:

Patient.—Miss X., aged about 39, fond of society, cultured, imaginative and pardonably vain of a heavy head of yellow hair.

History.—She came to me complaining of the serious damage which had been done to her scalp and hair while in a sanitarium for an attack of influenza. She stated that while in the sanitarium she had used some water in a bowl which had been brought from the kitchen and which must have contained some powerful chemical, since immediately after using this water her scalp began to burn. After a few days her hair began to change color, losing its gloss and becoming gray. The scalp became dry and scaly and the hair began to thin out. After some weeks another accident happened to her scalp from using some well-water containing lime and sulphur, as she had ascertained from a chemical analysis which had been made for her by a druggist. As a result of the use of this water her scalp burned as if something were eating into it. This burning lasted for about two months, the hair becoming thinner and grayer. Following this she gave a history of various mishaps resulting from the treatment given her scalp by hair dressers, physicians and dermatologists. In one case the damage was caused by the use of a strong carbolized vaselin, in another case it was due to an ointment of resorcin and sulphur which had been used for a number of weeks only to find her hair becoming thinner and grayer. Finally she gave up the use of all treatment except olive oil and despaired of ever getting well—even feared she would lose all her hair. She was, at the time of consulting me, so suspicious of further damage as to be almost hysterical about allowing anyone to touch her head. Insisted on my hands being disinfected with bichlorid solution before touching her hair. She objected to any form of medication and said that she would allow only distilled water to be used for a shampoo.

Now what was the condition of her scalp at the time of her first visit? As far as objective appearances went it was absolutely normal. Her skin was thin, dry and subject at times to erythema and chapping. It was impossible to make an examination as to paresthesic areas or to find any definite ground for diagnosticating hysteria. But it was clearly evident that her loss of hair and the change in its color was more subjective than real and in any case more attributable to the result of the attack of influenza and the resulting neurotic condition than to what she had used. Nothing a physician might order for external use would be free from suspicion. The case was one for general hygienic treatment and suggestion. Unless such a patient's confidence can be gained it is useless to order any stimulating lotion, as all sorts of imaginary changes in the scalp and hair will surely be attributed to the local application.

I am indebted to Dr. J. M. Winfield, of Brooklyn, for the history of the following case, which bears many points of resemblance:

Patient.—Mrs. M., aged 35, a native of the U. S., and the mother of two children, 12 and 8 years of age, respectively.

History.—As a young girl and as a married woman she has been very proud of her hair, which was fine, silky and of a golden color and very abundant. Five years ago her hair began to fall out. She had not been ill nor was there any ascertainable cause. At first she paid but little attention to the hair falling, thinking it was natural, but later, however, on its continuing to fall, she became nervous and mentally depressed. I saw her a number of times. She gave the history of a spoiled child and wife; being rather pretty (of the doll type) the loss of hair made her melancholic. While she had lost quantities of hair she still had more than most women. From a condition of neurasthenia she has become almost a fit subject for an institution for the insane. She had lost flesh, did not eat, was suspicious of her husband's fidelity; would not go out during the day because "people made remarks" about her hair. She was more depressed when constipated and about the menstrual periods, and at times she had thoughts of suicide. Treatment by tonics, rest and proper outdoor exercise would stop the hair from falling, but the moment she became depressed the condition of the scalp was aggravated. No other hairy parts of the body were affected. There is nothing in the history (family or personal) that could account for the mental state, except that she was coddled and spoiled as a child and was allowed to be proud and vain.

In men the most frequently observed forms of hair-worry is in those who have acquired syphilis and who dread any slight increase in the loss of hair as an onset of that condition described in Timon of Athens, to "make the curl'd pate ruffian bald," as particularly to be dreaded from its revealing character.

This is especially the case in young men whose scalps are already affected with a mild steatoid pityriasis and who have paid little or no attention to the small daily loss of hair until, under the dread of specific manifestations, together with the toxic effect of the specific virus on the hair bulb, their worry becomes almost a monomania. Dr. Herman G. Klotz, in a paper[1] entitled "Remarks on Syphilitic Alopecia," emphasizes the points that loss of hair is not a common or regular symptom of the early stage of syphilis and that the slight loss of hair, which is constantly taking place in healthy individuals, as the result of the physiologic change of hair, continues its existence through and beyond the course of syphilis and must be taken into consideration before attributing to syphilis a loss of hair so slight as to pass unnoticed. In the discussion which followed, Dr. Robert W. Taylor said that he would classify the various types of syphilitic alopecia as follows: 1. Alopeciaphobia, by which he meant an ordinary *defluvium capillorum,* the danger of which was much magnified in the mind of the patient, who was afraid of losing his entire hair. 2. A shedding of the hair such as occurred in many adynamic diseases. 3. The moth-eaten, characteristic form of syphilitic alopecia occurring in spots. 4. An alopecia due to syphilitic lesions.

In these cases of hair-worry the patient should be told when there is an underlying steatoid pityriasis that this condition has nothing to do with the syphilitic process

1. Read before the American Dermatological Association at Cleveland, June, 1906, Jour. Cut. Dis., 1907, p. 99.

and will probably continue to cause a daily loss of hair even when the syphilis is thoroughly treated. In such cases an active local treatment will do much good. Many of these cases are not so entirely neurotic and it may be well at this point to briefly run over the causes of the hair falling out.

LOSS OF HAIR FROM GENERAL TOXIC CONDITIONS.

First, the loss of hair following febrile and severe constitutional diseases. The eruptive fevers, such as measles, smallpox, scarlet fever, have a more depilatory effect on the scalp in adults than in children, but all the severe infections, such as typhoid fever, pneumonia, pleurisy erysipelas, peritonitis, grippe, mumps and even appendicitis, may cause a considerable falling out of the hair. Labor, even when normal and unaccompanied by fever, may be followed by a diffuse alopecia. According to Sabouraud, in all these cases there is a period of about eighty-five days intervening between the exciting cause and the loss of hair.

Alopecia due to syphilis may follow in two or three months after the secondary rash, or thinning out of the hair may not occur before the fifth to the eighth month. As a rule, this thinning out does not appear after the first year of the disease, but there is a form of syphilitic alopecia in patches which may develop in the second year of the disease. The typical specific alopecia in "clearings," as Brocq calls it, on account of its resemblance to the clearings in woods, occurs in the temporo-parietal and occipital regions and by its moth-eaten appearance is so pathognomonic that a diagnosis of syphilis may be often made from this alone.

General cachectic conditions due to tuberculosis, cancer, etc., also may act on the nutrition of the hair unfavorably and cause an alopecia. We have good grounds for considering all these cases to be due to the existence of a toxin in the circulation, a toxin which has a specific action on the hair bulb, and the extent of the depilation as well as the length of time before renewal of the growth varies with the severity of the disease causing the alopecia.

What are the grounds for this hypothesis? Experimentally, it has been shown that four doses of 0.08 gm. each of thallium acetate, a drug at one time employed to prevent the night sweats of phthisis, has caused a complete alopecia. This alopecia comes on fifteen to twenty days after absorption of the drug and appears first on the temples and back of the head and may progress in a few days to complete alopecia. Buschke[2] made a number of experiments on animals to see if the antagonistic effect of the thallium on the secretion of the sweat glands was the real cause of its producing alopecia. This theory had some plausibility, since pilocarpin, a stimulant of the sweat glands, has some reputation as an agent stimulating an increased growth of hair. He found from his experiments on animals that the antagonistic effect of thallium to pilocarpin on the sweat glands seemed to bear no relation to its depilating effect, but seemed to be due to some specific action on the hair bulb, and that the alopecia due to thallium acetate in animals, as in man, always began on either side of the median line of the head, face and back. He found also that external irritants elsewhere on the body could not induce alopecia away from this typical localization.

LOSS OF HAIR FROM LOCAL TOXIC CONDITIONS.

When we consider the loss of hair from local diseased conditions we at once encounter that great confusion of authors regarding desquamative and seborrheic conditions of the scalp. Sabouraud has marked off the boundaries of this confused group through his histologic and bacteriologic studies. According to Sabouraud, the chronic dry exfoliation of the scalp in fine branny scales, the ordinary dandruff, is caused by the growth of the spore of Malassez—the *"Flaschenbacillus"* of Unna. This microphyte, although uncultivable, is found deep down in the loosened-up horny layers and is not found in other conditions. This dry pityriasis resembles very much in its chronicity pityriasis versicolor, the causal agent of which, the microsporon furfur, although uncultivable, is never questioned. This dry pityriasis may last a lifetime without causing any marked loss of hair, but when it becomes greasy or steatoid the hair begins to thin out. This greasy condition may be due to one or both of two causes: a concomitant infection by the staphylococcus of porcelain-like growth, causing a serous exudation through the epidermic layers, or by the bacillus of oily seborrhea causing a hyperkeratosis in the mouths of the sebaceous follicles and a greatly increased flow of oil from the sebaceous glands, which chokes off and causes a shedding of the hair.

In man the process of becoming bald may be divided into three stages: First, the simple dry pityriasis or dandruff stage which in some individuals may last a lifetime without a marked baldness developing; second, that of steatoid pityriasis, in which the scales become greasy, more piled up and the hair begins to fall out more diffusely in periods of greater or lesser activity. New hair may continue to replace those lost, but the condition may pass on into the third stage of oily seborrhea in which there is very little scale formation, but the scalp becomes very oily and the hair falls more and more abundantly, being replaced by more and more downy growth until the typical hippocratic bald head is constituted.

In women the process rarely advances beyond the stage of steatoid pityriasis. The real oily seborrhea in women is only found in women of a masculine type.

The loss of hair due to ringworm and favus may be omitted on account of its extreme rarity in adults. I have seen a number of cicatricial alopecia cases in adults among immigrants from Russia and Italy, but never in native-born Americans. Any dread of hair loss among immigrants is not due to trichopathophobia, but purely from the dread of not being able to pass the medical inspection for admission to this country. Postfuruncular and postimpetiginous alopecia, as well as Brocq's pseudopelade, or *alopecia cicatricielle,* may also be passed on account of extreme rarity in adults.

Alopecia areata, however, is a type of *defluvium capillorum* which may cause really marked cases of trichopathophobia. In fact, I have seen in private practice both men and women seriously upset mentally by this form of hair loss. In nearly all such cases the dread seems to be due to the fear that they will be suspected of having syphilis. While, as has already been mentioned, this alopecia in areas may result from syphilis, either acquired or hereditary, syphilis is by no means the usual cause. Chronic tuberculosis and some change dependent on the menopause is given by Sabouraud as occasional causes, but the most of such cases are due to unknown causes.

Sabouraud's claim of an underlying infection with the bacillus of seborrhea and Jacquet's theory of nervous origin from peripheral irritation, oftentimes dental irritation, both seem to be insufficiently supported by facts. It is true that in all the cases coming under my observa-

2. Berlin klin. Wochschr., 1903, xxxvi.

tion there has been found a history of dental caries or toothache and that the cases always improved after the teeth were attended to, nevertheless, as local antiseptic and stimulating treatment was employed, I can not attribute all the good effect to the dental treatment alone. The frequency of alopecia areata is not at all in proportion to the great frequency of diseased teeth and other underlying causes must be sought for.

WORRY OVER THE COLOR OF THE HAIR.

This is not frequently met with, but certain shades of red seem to be particularly a cause of mental distress in young girls on account of the taunts of playmates. An amusing account of a peculiarly sensitive young man and his attempts to change the color of his red hair is given by Warren in his "Ten Thousand Pounds a Year." Through the use of various dyes and bleaches the color of his hair became as diversified as Joseph's coat, to the great chagrin, almost despair, of the hero.

WORRY OVER GRAY HAIR.

Worry is one of the usually given causes of prematurely gray hair. Cases of sudden blanching of the hair in one night are numerous and well authenticated. Metchnikoff[3] refutes the opinion often expressed that this whitening of the hair is due to the penetration of air bubbles into the hair shaft. The change of color, he says, is due entirely to the loss of pigment caused by the sudden activity of cells in the medullary layer, which he calls pigmentophages or, better, chromophages. These chromophages leave the medullary or central portion of the hair and attack and absorb all the pigment granules within reach in both cortical and medullary layers. These cells then either wander back through the hair bulb or may pass out through the hair itself.

Metchnikoff says, also, that these pigmentophages are most active at night and that it is quite possible for them to blanch a hair in one night. This theory is not easily reconciled with facts shown by ringed hairs or the colorless hairs which first come in on a patch of alopecia areata and which later become pigmented.

Worry over the hair becoming gray, while common enough, rarely becomes a monomania. In some neuropathic women, however, this dread of appearing old drives them to use hair dyes in spite of harmful effects. Brocq[4] describes such a case in a young American woman, neuropathic, prematurely gray, who, in spite of a severe dermatitis extending from head to foot which resulted from using a hair dye containing paraphenylendiamin, persisted in dying her hair until the last attack, attended by fever, required several months' rest in the mountains before recovery took place.

DERMATOPATHOPHOBIA IN HAIRY PARTS OF THE BODY.

Various forms of dermatopathophobia may have their localization entirely in the hairy parts of the body. These pruritic dermato-neuroses are common in users of morphin and cocain, and the dread is usually of parasites, such as pediculi, etc. Sometimes these unnatural sensations in hairy parts may develop into a *tic d'epilation*, or a mania for pulling out hairs. This trichotillomania is a morbid state constituted by pruriginous sensations in certain hairy parts of the body and an irresistible desire to relieve the distress by pulling out the hairs in the regions affected. The mustache is the commonest location of this tic in adults.

3. Etudes Biologiques sur la Vieillesse, Ann. de l'Inst. Pasteur, 1901, 865.
4. Bull. Med., March 13, 1898, 239.

HYPERTRICHOPHOBIA, OR WORRY OVER HYPERTRICHOSIS.

Hypertrichosis in young women is the most frequent and most serious form of trichopathophobia with which we have to deal. All dermatologists have seen such cases. In certain neuropathic young women this excess of facial hair becomes such a fixed idea that the health may be seriously damaged by the loss of appetite, anemia, anxious, sad or melancholic state. The aversion to society and almost constant preoccupation of the mind about their deformity may develop into insanity.

Winfield[5] found hypertrichosis in 78 out of 1,084 insane. "All but eight of these cases occurred in females. The eight men had thin and coarse beards, but their bodies were thickly covered with hair, especially marked over the spine. Twenty of the women had a copious growth of thick stiff hairs on their lips and chins. Most of the others had an unusually thick fuz all over their faces; all of them, however, had an abnormal amount of coarse hair over their bodies, thickest on the chest and back.

"One case illustrates how the mental condition seems to influence the growth of the hair; inasmuch as this appears to be unique, a full history will be given. The subject was a German girl, aged 24. Late in 1900 she had been admitted to the asylum suffering from an attack of acute melancholia; after six months she was discharged. Dr. Warren, who had charge of her, stated that while she was profoundly melancholic there seemed to be an increased growth of hair all over the body, especially marked on the face. She was readmitted in January, 1902, suffering from a relapse. Examination at that time did not reveal anything especially abnormal regarding the hair, except, perhaps, that she was a little more hairy than most females of her age.

"Her mental condition gradually grew worse until she went into profound melancholia. It was then noticed that the lanugo hairs all over the body were becoming thicker and stiffer. This change was most marked on the face, which rapidly became covered with a growth of fine blonde hairs, some being one-fourth to one-fifth of an inch in length. Her appearance at that time suggested a mild type of the 'Russian dog-faced boy.' After three months her mental condition slowly improved; simultaneously the superfluous hairs began to drop out, and on August 1 her face and body were as free from hair as when I first saw her."

I am indebted to Dr. Winfield for the history of a patient in his private practice who became insane on account of worry over hypertrichosis.

Patient.—Miss H. P., American, aged 20, large, well-developed girl.

History.—The girl had a high school education, but was unable to keep up with her classes on account of nervousness. At puberty (established at 14 years) a growth of fine hair appeared on the lip and side of the cheek. This troubled her so that she refused to go out, would not go to school, and spent most of her time crying. I was consulted regarding the removal of the hairs. She was unreasonable, had fixed delusions, obsessions, and in fact all the symptoms of insanity. The growth of hair on the face was just enough to unbalance the mind, which was already overworked. The parents had made an idol and fool of the girl, and the mental condition was the direct outcome of it.

If the hypertrichosis is very marked on the chin or upper lip or on the cheeks it becomes, of course, almost a

5. Dermatoses of the Insane, American Jour. of Insanity, 1903, lix.

vital question for the patient to have the hairs removed, but many of these patients are worried over a mere downy growth to an extent that is far greater than the actual deformity justifies. Such cases must be reasoned with or prevailed on by suggestion, with perhaps the use of hydrogen peroxid to bleach the hairs so as to be less conspicuous.

The treatment of hypertrichosis by means of radiotherapy has not fulfilled its promise. Kienbock, Brocq, and Belot all agree that in the present state of our knowledge we are not in a position to produce a permanent alopecia with any degree of certainty, and in certain persons of great sensibility there is danger of producing permanent cutaneous lesions, such as scarring pigmentation, telangiectases, etc., which are more disfiguring than the hypertrichosis itself. Electrolysis therefore still remains the method of choice in these cases.

While the influence of precocious, perverted or arrested activity of the sexual functions may be given as causes of hypertrichosis, it does not follow that such women are sterile, in fact pregnancy, by its profound modification of the organism, may cause such hypertrichosis to disappear as in the very interesting case reported by Hyde and Montgomery in their Treatise on Diseases of the Skin. This case is all the more instructive in showing the effect of internal ovarian secretion, since the patient, a married woman, 33 years of age, weighing 150 pounds, mother of three healthy children, stopped menstruating for more than a year and had been pronounced by an expert to be past the climacteric. She applied for relief with a well-developed beard and mustache. During two years, repeated electrolytic séances were given to remove the superfluous hairs. Menstruation became re-established and continued irregularly, even menorrhagic at times; the hirsuties entirely disappeared. A year later she again conceived and gave birth to a healthy boy, the hirsuties at that time being entirely absent.

I have seen a slight hypertrichosis of the mammary areolæ also disappear under the effect of a pregnancy and remain permanently away.

Dr. Sherwell, before the New York Dermatological Society, stated that a profound modification of the organism, such as pregnancy, had been observed to cure a generalized and intractable alopecia. The internal ovarian secretion has an undoubted effect in stimulating the growth of sexual hair and cases have been cited which show that in woman the disturbed condition of ovulation has both caused an atrophy of hirsuties and has apparently stimulated the regrowth of hair in a case of total alopecia.

WORRY OVER THE LACK OF BEARD.

That the internal secretion of the testicles should be lacking in cases of removal of the testicles or in cases of undescended or atrophic testicles, seems to be attested by the absence of or scanty beards of such individuals. Quite naturally certain young men in whom there is a tardy appearance of beard worry a great deal over this lack of what they consider the badge of virility. Some of these cases, due to the above mentioned causes, are beyond relief, but suggestion and counter irritation may do much towards reassuring the worry over the absence of a beard in young men who, though having nothing the matter with the testicles, are comparatively devoid of beard.

50 West Thirty-seventh Street.

THE FREQUENCY, MORTALITY AND TREATMENT OF PLACENTA PRÆVIA.*

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The frequency of placenta prævia is variously stated at from 1 to 1,000 to 1 to 250 cases. It occurs six times as frequently in multiparæ as in primiparæ. We can readily understand, in view of this difference, how in the statistics of an indoor service in which most of the patients may be unmarried primiparæ the first proportion might exist, while in statistics from a consulting obstetrician's practice the lower ratio would prevail. In my outdoor charity service, in which 87 per cent. of the women confined were multiparæ and the average number of pregnancies was more than four for each woman, in 1,800 cases placenta prævia occurred eight times, or 1 to 225. As there is practically no means of prophylaxis, the advance of the art of obstetrics has not reduced the frequency of this complication.

THE PROGNOSIS.

In prognosis we find that there has been a constant improvement, and we may view with relief the recent statistics in comparison with the older records in which the maternal deaths were as many as 30 or 40 in the 100. Sepsis, of course, was the chief cause of the earlier high death rate. But, in addition to the introduction of asepsis, improvement in the methods of management has accomplished a great deal toward lowering the mortality.

Current literature gives evidence that there is not a uniform opinion as to the present mortality. From different viewpoints we find that placenta prævia is looked on differently. The confidence engendered in the highly skilled obstetrician who, armed with vast experience and surrounded in his hospital with perfect equipment and trained assistance, may approach these cases with *sang froid,* leads him to minimize the dangers of this accident. But we still find practitioners at large reporting their isolated cases in a manner which indicates that they were formidable events in their obstetric experience. The general practitioner who comes without warning and without assistance on a case of placenta prævia and finds the woman already far gone from hemorrhage has a terrific ordeal before him. Yet we find in a standard text-book of obstetrics the statement: "With the treatment just described, carried out by men who understand aseptic methods, the mortality almost disappears."

Hirst selected several series reported by men whose results had been especially favorable, and generalizing on these figures many writers, in discussing modes of treatment, have recently referred to the accepted mortality of placenta prævia as about 1 per cent. De Lee[1] reported one death in a series of thirty cases, but said "a woman with placenta prævia ought not to die except in rare cases, such as air embolism or the hemorrhagic diathesis." While approved methods have brought about a greatly improved prognosis, I do not think that the tendency to make light of placenta prævia as a serious complication is justified by the facts nor that the few most favorable series should be made the basis of an accepted death rate. After studying many recent statistics from hospitals and private sources, I believe I should state the mortality as follows: In the hands of

* Read before the Section on Obstetrics and Gynecology, New York Academy of Medicine, Oct. 24, 1907.

1. Placenta Prævia and Its Treatment, Int. Clin., 1906, iv, 220.

skilful obstetricians, with all advantages for treatment, the mortality is from 3 per cent. to 4 per cent. of all cases coming to them in all conditions. The general average for all practitioners meeting cases is about 8 per cent.

The death rate of the child has not decreased with the maternal mortality. From 40 to 50 per cent. is still the prevailing average. Prematurity, of course, is a great factor in this death rate. But the fetus is usually viable at the time at which placenta prævia is recognized, and we still have before us the problem of making the first substantial reduction in the deaths.

It thus becomes apparent that our present methods are still far from being ideal in results. We can not be satisfied with a mode of treatment of a not infrequent complication that yields us only 50 per cent. of living children.

SYMPTOMS.

Hemorrhage is the first and only prominent symptom of placenta prævia. It begins when the vessels forming the vascular connection between the uterus and placenta are torn during the separation of the margins of the internal os.

THE DIAGNOSIS.

The responsibility for the outcome of a case of placenta prævia lies with a physician as soon as he makes the diagnosis, and in the presence of hemorrhage of any degree in a pregnant woman in the last third of gestation placenta prævia must be assumed unless it can positively be eliminated. As the diagnosis usually lies between a low implantation and premature separation of a normally situated placenta, and as active treatment is demanded in both, there is no excuse for a practitioner to postpone intervention until a serious hemorrhage compels it in a case that has already presented some bleeding.

In order to make a certain diagnosis of placenta prævia the os must be sufficiently dilated to admit a finger, which will readily distinguish the condition. This should always be done, even though it constitutes the first step in induction of labor which is then inevitable. For if the palpating finger finds no low implantation the diagnosis of premature separation is established and emptying of the uterus is the absolute demand of the latter also.

Before the period of viability, with extremely mild symptoms of hemorrhage, expectant treatment may be instituted with careful watching, inasmuch as statistics show us that fatal hemorrhage is very rare in cases occurring before that time. But in the seventh month and thereafter we must not allow ourselves to be misled by the slight degree in which hemorrhage may present itself. There is no rule as to what will follow. Insignificant vessels may first be torn with slight bleeding resulting; a little more separation may cause a tear through a huge venous sinus or through a marginal vein and the resulting loss of blood may prove fatal.

THE TREATMENT.

Tamponade with gauze tightly packed into the cervix and absolutely plugging the vagina is generally accepted as the first step in treatment. This tends to control the hemorrhage, though it does not safeguard us against a concealed hemorrhage. On removing the tampon we usually find that some dilatation has taken place. Unless the cervix is sufficiently dilated and softened to assure us that a rapid delivery can soon be done by version

STATISTICS OF EIGHT CASES OF PLACENTA PRÆVIA.

No.	Age.	Para.	Period of Gestation.	Hemorrhage Began.	Condition of Cervix.	Type of Prævia.	Presentation.	Character of Hemorrhage.	Fetal Heart.	Condition of Patient.	Labor Pains.	Treatment.	Outcome for Mother.	Outcome for Child.
1	28	iii.	30 weeks.	At intervals, for several days.	Rigid. Dilated 1 finger.	Partial.	Vertex.	Moderate.	Weak.	Good.	Weak, irregular.	Gauze tampon; rupture of membranes. Braxton-Hicks version, spontaneous delivery.	Good recovery.	Stillborn.
2	32	iv.	Term.	With labor.	Soft, 3 fingers.	Lateral.	Vertex.	Moderate.	Rather weak; 160.	Good.	Good.	Cervix readily dilated manually. Extraction after internal podalic version.	Good recovery.	Living.
3	42	vii.	34 weeks.	Bleeding for a week when about.	Long, rigid, 1 finger.	Marginal.	Vertex.	Intermittent, severe.	Not heard.	Rath'r weak; exsanguinated.	None.	Gauze tampon of cervix and vagina. Braxton-Hicks version. Spontaneous delivery.	Good recovery.	Stillborn.
4	28	v.	Ninth month.	With labor.	Soft, 2 fingers.	Partial.	Vertex.	Severe.	Feeble, not counted.	Weak; rapid pulse.	Strong at first.	Rupture of membrane. Braxton-Hicks version. Extraction. (Uterine inertia.)	Recovered. Prolonged convalescence.	Stillborn.
5	34	vii.	34 weeks.	Oozing six days.	Closed, rigid.	Marginal.	Vertex.	Moderate, constant.	Fairly strong; 140.	Good.	Induced by tampon.	Vaginal tamponade. Second tamponade of cervix and vagina; thereon cervix softened and dilated. Rather rapid manual completion of dilatation. Podalic version. Extraction.	Good recovery.	Living.
6	24	v.	Term.	Few drops 2 wks. before hemor. with labor.	Soft, 4 fingers.	Marginal.	Vertex.	Profuse.	Strong at first, weakened rapidly.	Fair.	Strong, regular.	Rupture of membranes. Bleeding very much diminished. Full dilatation. Forceps.	Recovery.	Living.
7	25	iii.	36 weeks.	Bleeding freely with beginning of labor.	Long, 2 fingers.	Central.	Vertex.	Profuse.	Weak and rapid.	Pale; rapid pulse.	Infrequent, short, weak.	Separation of placenta around the os. Boring through placenta and rupturing membranes. Braxton-Hicks version.	Recovery. Phlebitis.	Lived 3 days.
8	35	vii.	Eighth month.	Dripping of blood at intervals. Two wks. in bed.	Long, fairly soft, 1 finger.	Marginal.	Vertex.	Slight.	Good.	Good.	Began after packing.	Plug of cervix and vagina with gauze. Dilatation proceeded nicely. Moderate continual bleeding. Ruptured membranes, applied forceps; delivered slowly.	Good recovery.	Living.

the next step is to rupture the membranes. In some cases, especially in lateral implantations, the letting out of the water may be the only interference necessary. In such cases the head coming down controls the hemorrhage by pressure on the placenta while the lessening of the uterine cavity takes place with a general contraction of the uterine muscle and its vessels. The forceps may be used later to advantage in such cases.

The Braxton-Hicks method has long been the favorite measure for treatment of placenta prævia. As soon as the cervix admits two fingers they are passed into the uterus, over the edge or through the substance of the placenta and, after rupturing the membranes, a foot is sought. Jolly has pointed out that in performing the combined version catching the foot is not, ordinarily, the simplest of procedures. But he has found that if the entire hand is passed into the vagina and the uterine cavity is fully drained of its water, the foot is readily found as the breech is pressed down. If, however, the water is allowed to dam back in part the foot is apt to be elusive. Once the foot is brought down the half breech makes compression on the placenta and the bleeding is controlled.

In place of the Braxton-Hicks method the use of the Champetier de Ribes bag is very effective. After rupture of the membranes the bag is inserted within the lower uterine segment and dilated with fluid. Traction is then made on it. What with traction from below and the pressure of the presenting part from above, it firmly compresses the placenta. The hemorrhage is perfectly controlled and dilatation of the cervix proceeds. We then have an opportunity of doing a forceps extraction with a somewhat improved outlook for the child.

In the interest of the mother, with an undilated cervix, rapid delivery is never indicated. If the hemorrhage is alarming the cervix may be forcibly dilated so far as to enable us to do a Braxton-Hicks version or to exert other pressure to control hemorrhage, but for the mother's welfare rapid complete dilatation and extraction is contraindicated. Tears of the cervix are particularly disastrous in placenta prævia and the patient has usually lost so much blood before that every drop must be saved.

THE SAFETY OF THE CHILD.

But it is just on this point, no doubt, that future controversy must be waged and that our technic will be changed. By means of conservative measures we find that our maternal mortality has been decreased wonderfully. But the original fetal mortality is still with us. Against this fetal death rate must our progress be made. We are told by Schroeder and others that the more we disregard the life of the fetus the better our results with the mother. Yet if we have a living child that is failing rapidly we are reluctant to stand idly by while its life is ebbing away. If the cervix lacks little of full dilatation we may feel that a rapid delivery is possible at a minimum of risk to the mother. When such a proposition presents, our position is a difficult one. Have we, indeed, the right to pronounce the death verdict of the fetus in such cases? Moreover, when such questions arise, may we be influenced by personal factors? An heir may be greatly desired by the parents. On the other hand we may have abundant evidence in the presence of a half dozen children in an adjoining room of a tenement that one more child will be *embarrass de riches*. But is it within our province to pass judgment on these questions at all? I believe that we have no moral right to discriminate. The mother's safety in every case should be the most important consideration. But if there is a strong probability of delivery of a living child at the expense only of the slightest tear of the cervix, I think we may take the risk of extraction, depending on prompt packing to remove the danger of subsequent bleeding.

CESAREAN SECTION.

To the same end Cesarean section has its indications. It is apparent that a few years will give us more statistics of this operation for placenta prævia from which we may judge better of its value and its limitations. If we place the mortality of placenta prævia at the lowest figures as obtained by the most skilful men operating under the best conditions, then for comparison we must take the best results obtained from a similar standard of work in Cesarean section. We will find the statistics are as good for Cesarean section in general as for placenta prævia treated by other methods. The chances for the mother being equal under the two methods, the one which offers the best chance for the child must undoubtedly appeal to us. The fetal mortality in Cesarean section in general is less than in placenta prævia. In those cases of placenta prævia which we would probably select for Cesarean section, viz., patients presenting long, rigid cervices, especially with complete prævia, the chance for a living child would be extremely poor under other methods. Therefore, though the status of Cesarean section for placenta prævia can hardly be said to be satisfactorily established, I believe it should be given a trial under proper conditions in the interest of the child.

On page 24 are the statistics of eight cases of placenta prævia occurring in 1,800 cases of labor attended in the service of the free maternity dispensary conducted by me at 216 Seventy-sixth street, New York.

SUMMARY OF TREATMENT.

In all cases the uterus was completely emptied, though only once was manual extraction necessary. In several of the cases in which there was considerable loss of blood or slight tears of the cervix the uterus and vagina were firmly packed with gauze after the third stage. The four infants that were lost (one after three days) were all premature. Of the four that lived two were at full term. In the cases in which stillbirth occurred the condition of the cervix or the general condition of the woman was such that no liberties could be taken in extraction. In fact, in spite of our desire in theory to give the child every chance, there are many cases in which we are absolutely limited by conditions to a course that is unfavorable to it.

Cases 1, 3, 5 and 7 might have been chosen for Cesarean section because of the condition of the cervix. In one of these, Case 5, the tamponade of the cervix and vagina brought about good dilatation of the cervix. Delivery was hastened by manual completion of dilatation and internal podalic version and extraction. The child was saved and the mother suffered no ill effects. In Cases 1 and 3 the cervix did not dilate rapidly after the tamponade. It was not possible to hasten delivery. After rupture of the membranes and Braxton-Hicks version the delivery was left to nature. In both cases the child was still-born. In Case 7 the cervix admitted two fingers. No tampon was used. A foot was brought down at once and a slow extraction done. The child survived a few days only. Of these four cases in which the condition of the cervix was such that Cesarean section

might have been chosen, only one child was saved by the other means employed. Yet the cases were treated as aggressively as the safety of the mother allowed.

In Cases 2, 4 and 6 the cervix was dilating and soft and Cesarean section would hardly have been thought of. Case 8 presented a cervix that was soft though undilated, and the marginal insertion and slight bleeding were also favorable elements. In these four cases the methods used were fairly satisfactory, as only one of the infants perished. In summarizing I should say:

1. Among multiparæ placenta prævia can hardly be called a rare complication. In 1,800 cases, of which 87 per cent. were multiparæ and the average number of pregnancies 4 plus, I have found the ratio to be 1 to 225.

2. The mortality has been understated recently because of too broad generalization on a few highly favorable case reports.

3. There has been very little reduction in the fetal death rate, which is still from 40 to 50 per cent.

4. In the presence of hemorrhage in the last third of gestation the cervix should immediately be dilated sufficiently to allow of a diagnosis by the finger, and if placenta prævia is present the uterus should be emptied without delay.

5. Tamponade of the cervix and vagina is useful as a preliminary step.

6. The Braxton-Hicks version is effective in controlling hemorrhage and is the safest procedure for the mother, but it does not give satisfactory results for the child. When the dilatability of the cervix makes us positive that delivery can be effected with little or no tearing of the cervix we may elect rapid delivery by version or forceps, packing the uterus and vagina if there is bleeding after the third stage.

7. In cases presenting long, rigid cervices, complete prævia and a viable child, if the surroundings are favorable, Cesarean section should be chosen in the interests of the child.

8. The advance in treatment for placenta prævia has been remarkable in reducing the maternal death rate even though the saving of the patients has not been brought so near to being an exact science as some authors would suggest. It would seem that progress must be directed to decreasing the fetal mortality.

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THE EFFECTS OF HYDRASTIS AND ITS ALKALOIDS ON BLOOD PRESSURE.*

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Hydrastis is usually considered as having marked styptic properties due to a local vasoconstriction, and it has been recommended as a remedy of great value in uterine hemorrhages[1] and hemoptysis.[2] This is based mainly on clinical observations.

Looking for experimental evidence to support this view, it was interesting to note that practically all the investigators found no constriction of the arterioles. They obtained, on intravenous injection of the drug, a marked fall of blood pressure, followed by a slight rise, the latter being attributed to stimulation of the vasomotor center (Marfori,[3] Falck,[4] Pellacani,[5] Fellner,[6] Cushny[7]). With this contradiction of the clinical observations by the experimental evidence of numerous workers in mind, the present investigation of the effects of hydrastis on the mammalian circulation was undertaken. Investigation was also made of the effects of its two principal alkaloids, hydrastin and berberin, and of the derived alkaloid, hydrastinin.

METHODS.

The animals were given morphin and then anesthetized with ether or Gréhant's solution.[8] The blood-pressure tracings were taken from a mercury manometer, connected with a carotid artery. The change in volume of the kidney or spleen was determined by enclosing the organ in a metal case containing a thin rubber bag filled with water and connected with a water manometer. This will be referred to always as the oncometer. The myocardiograms were obtained by inserting a long needle through the chest wall into the heart muscle and connecting the distal end with a writing lever. The respiratory tracings were made by connecting the tracheal cannula with a Brodie's tambour. The injections were made from a burette into a femoral vein towards the heart, the solutions being diluted with physiologic saline solution, so that from 0.5 to 2 c.c. of fluid per kilogram of body weight was injected.

EXPERIMENTS WITH HYDRASTIS.

(INTRAVENOUS ADMINISTRATION.)

Fifty-seven injections were made on twenty-seven dogs. The amount of the fluidextract hydrastis injected varied from 0.005 to 1 c.c. per kilogram of body weight. This produced in every case a slight temporary rise of blood pressure, from 5 to 15 mm. mercury. This is probably a mere mechanical effect from the influx of fluid. It is promptly succeeded by a fall of from 8 to 118 mm. In 30 of the 57 injections (52 per cent.) the blood pressure returned equally as promptly to normal after the fall; in 13 (23 per cent.) the fall was followed by a slight rise above normal, from 8 to 20 mm., which was not long sustained; in 11 (19 per cent.) the pressure only partly recovered, remaining about 25 mm. below normal, and in 3 (5 per cent.) the pressure remained low.

It was found that the extent of the fall and the recovery or secondary rise above normal depend on the dosage. The amount injected causing a rise of pressure above normal after the preceding fall was up to 0.02 c.c. per kilogram. The amount causing a fall with prompt recovery to normal was 0.025 c.c. per kilogram. With only partial recovery the amount was 0.073 c.c. and 0.367 c.c. per kilogram caused a marked fall with no recovery of the pressure.

From the above it will be noted that the fall of blood pressure is a constant and very conspicuous effect of the intravenous injection of hydrastis; that with small

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

* From the Pharmacological Laboratory, Western Reserve University Medical Department.

1. Schatz: Ueber d. Anwendung v. Hydrastis canadensis in der Gyn., Centrbl. f. Gyn., 1883, xliii.

2. Hamamelis u. Hydrastis bei Lungenblutungen, Therap. Monat., 1888.

3. Pharmakol. Untersuchungen über Hydrastin Arch. f. exper. Pharm., xxvii.

4. Hydrastin u. Hydrastinin. Virchow's Archiv., cxix.

5. Quoted by Heinz, Handbuch der exper. Path. u. Pharm., 1906, ii.

6. Die physiol. Wirkung der Hydrastis canadensis. Centrbl. f. d. med. Wiss., 1884; Experiment. Beitr. z. Wirkung d. Hydrastis. Wien. med. Presse, 1897, 15 and 16.

7. Text-Book of Pharmacology and Therapeutics, 1903.

8. Composed of from 7 to 10 c.c. per kilogram of body weight of 2.5 per cent. chloroform in 50 per cent. alcohol.

doses up to 0.03 c.c. per kilogram the pressure promptly recovers and may rise somewhat above normal, while with larger amounts up to 1 c.c. per kilo the fall only partly recovers or the pressure remains low. Figure 1 illustrates very well the effects of increasing doses on the blood pressure.

EFFECTS ON THE VAGUS.

It was found that with doses up to 0.075 c.c. per kilo the vagus retained its excitability; so that section of both vagi caused a marked increase in the heart rate and some rise of blood pressure, while stimulation by electricity caused stoppage. On the other hand, larger doses, from 0.8 to 1.0 c.c. per kilo caused depression or paralysis of the vagus peripherally. In two instances after injection of 1 c.c. and 0.5 c.c. per kilo no quickening of the heart rate occurred after section of the vagi. In two others, after injection of 0.1 c.c. and 0.125 c.c. per kilo, stimulation of the vagus with the full strength of a Harvard coil caused no slowing. In another, after injection of 0.08 c.c. per kilo, stimulation with the full strength of the coil caused the heart rate to decrease from 160 to 68 per minute, but no stoppage of the heart occurred. In view of these findings, the vagi were divided in all the dogs before the experiment if the injections were not to exceed 0.05 c.c. per kilo.

In several experiments there was a slight tendency towards slowing of the heart during the fall of blood pressure, with some increase in rate during the succeeding rise, but on the whole the changes were so slight and inconstant that nothing was learned.

The respiration was not affected, unless the blood pressure was markedly lowered by the injections, when it became dyspneic.

MYOCARDIOGRAMS.

In about one-third of the cases myocardiographic tracings were taken simultaneously with the blood-pressure tracings. In all of them the heart excursions were increased with the preliminary rise, becoming smaller as the blood pressure fell and again becoming larger as the pressure recovered. Figure 2 is a typical tracing. At × 0.02 c.c. per kilogram was injected into the femoral vein.

The blood-pressure and cardiac tracings agreed exactly. This shows that the pressure changes are, at least mainly, of cardiac rather than of vascular origin.

THE ONCOMETER.

Over one-third of the blood-pressure tracings were accompanied by oncometric tracings or curves plotted from readings. With one exception, to be referred to later, all of them showed an increase in the size of the organ coincident with the preliminary rise of the blood pressure, succeeded by a diminution in volume as the pressure fell and then expanding again while the pressure was recovering. The two tracings are parallel throughout their course, as is well shown in Figure 3. At × 0.04 c.c. per kilo was injected, causing a rise of 15 mm., then a sharp fall of 66 mm., gradually returning to normal during the succeeding 15 minutes. The oncometer tracing follows the blood-pressure tracing in every detail, even varying with the respiratory pressure changes.

The one exception, where the curves were not the same, was in the case of a dog which had received 0.54 c.c. per kilo in 10 injections. This large dosage caused a complete vasomotor paralysis, the pressure falling from 121 to 15 mm., and this overshadowed the cardiac effects. With this one exception, the oncometric observations again indicate that the circulatory changes are, at least predominately, cardiac rather than vasomotor.

With the idea of determining if the vasomotor center played any rôle in the blood-pressure changes, the center was excluded by section of the spinal cord between the third and fourth cervical vertebræ in two dogs, but in each case the pressure fell so low that the results of the injections were indecisive. However, it was not deemed necessary to carry this line of investigation further after noting the perfect agreement of the heart-muscle changes and the changes in the volume of the organs with the blood-pressure phenomena.

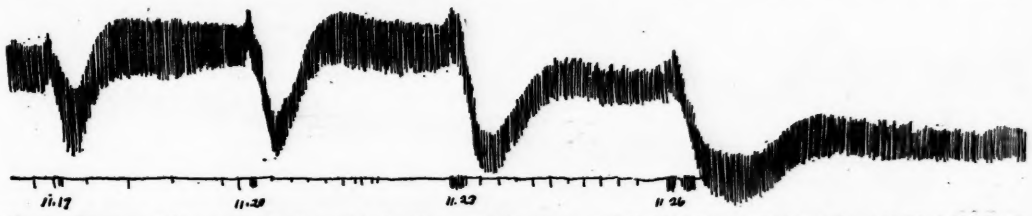

Fig. 1.—Effect of intravenous injection of hydrastis on blood pressure. At 11:17, 0.01 per kilo injected; at 11:20, 0.02 per kilo; at 11:23, 0.04 per kilo; at 11:26, 0.08 per kilo. The spaces marked off on the lower line represent periods of 15 seconds.

Fig. 2.—Myocardiogram. At X injection of 0.02 c.c. per kilo.

The results of perfusing excised organs—kidney, spleen and leg—while not conclusive, point to some dilatation of the vessels in excised organs, causing a rise of the oncometer and increased outflow.

HYPODERMIC ADMINISTRATION.

One dose of 0.2 c.c. per kilo and three of 0.5 c.c. per kilo of hydrastis were injected subcutaneously in dogs, and during 30 minutes no changes occurred in the blood pressure, heart rate or heart excursions as demonstrated by the Fick manometer, or in the respiration. The vagus excitability was not altered.

The equivalent dose for a man weighing 150 pounds would be 14 c.c. of the fluidextract for the 0.2 c.c. per kilo and 35 c.c. for the 0.5 c.c.

ADMINISTRATION BY STOMACH.

Two dogs were given 0.5 c.c. per kilo of hydrastis by stomach tube, and in neither of them was any alteration manifested in the blood pressure, heart rate, myocardio-

gram, oncometer or respiration. About 35 c.c. of the fluidextract would be the equivalent dose for a man weighing 150 pounds.

PERFUSION OF TURTLE'S HEART.

A 1 to 1,000 fluidextract of hydrastis in 0.75 per cent. solution of sodium chlorid was used in perfusion of a turtle's heart. The rate became slower, the contractions weaker and the outflow was considerably diminished.

The same effects were produced in a dog's heart perfused by the Langendorff method.

FROG.

One c.c. of a 5 per cent. fluidextract of hydrastis was injected into the ventral lymph sac of a frog. Fifteen minutes later spontaneous clonic spasms of the hind legs occurred with marked increased reflex excitability. On stimulation, typical strychnin-like convulsions were produced. Pithing the brain had no effect on the convulsions, but they were abolished when the cord was pithed.

The heart was exposed and found beating regularly at the rate of 30 per minute. Several drops of 5 per cent. hydrastis solution were applied, and in one minute the rate had dropped to 24 and it gradually slowed to 12, at which rate it remained, beating for three hours.

EXPERIMENTS WITH HYDRASTIN.

Twelve injections were made on 5 dogs, the dosage varying from 0.001 to 0.01 gm. per kilo. In all except two there was a small preliminary rise, followed by a fall of blood pressure with more or less recovery. The two injections after which there was no rise of pressure caused a marked fall with no recovery, one resulting in stoppage of the heart.

The heart was strengthened during the rise, becoming weaker with the fall of pressure and again stronger as the pressure recovered. The oncometer showed the same variations as described for hydrastis, although the decrease in the volume of the organs appears to be greater during the fall of pressure. Perfusion of the turtle's heart with a 1 to 10,000 solution in 0.75 per cent. solution of sodium chlorid did not show much slowing of the rate, but the output was markedly diminished.

Injection into the ventral lymph sac of a frog of 1 c.c. of a 1 to 1,000 solution caused typical strychnin-like convulsions, which ceased when the cord was pithed. On exposing the heart it was found to have stopped in diastole.

From the above it is apparent that the effects of hydrastin agree qualitatively with those of hydrastis, being principally caused by depression of the cardiac muscle followed by more or less recovery, but comparing the results more closely it seems that hydrastin has a tendency to cause more marked depression.

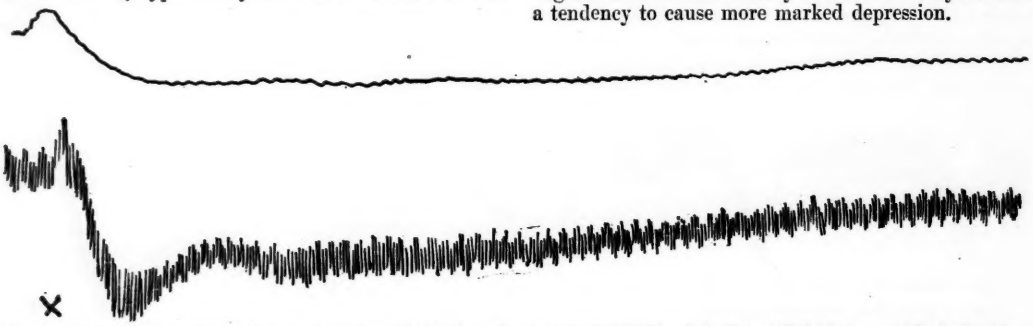

Fig. 3.—Comparing oncometer tracing (upper) with blood pressure tracing (lower). Injection at X 0.04 c.c. per kilo hydrastis.

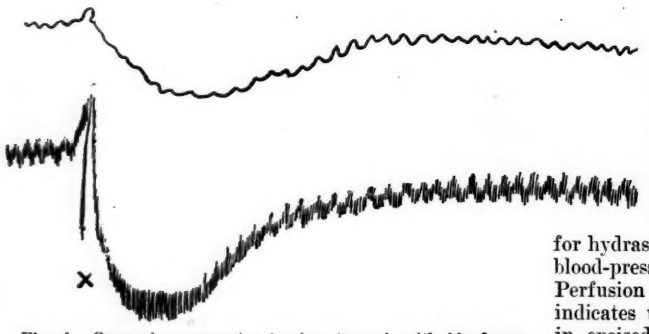

Fig. 4.—Comparing oncometer tracing (upper) with blood-pressure tracing (lower); at X injection of 0.005 mg. per kilo. berberin.

EXPERIMENTS WITH BERBERIN.

Five injections of berberin were made on three dogs, with quantities of 0.001 and 0.005 gm. per kilo. In all of them there was a short preliminary rise of blood pressure, followed by a sudden marked fall, the pressure returning to normal in about 4 minutes. Myocardiograms showed the same heart changes accompanying the pressure phenomena as have been previously described for hydrastis. The oncometer tracing follows exactly the blood-pressure curve, which is illustrated in Figure 4. Perfusion of excised organs—kidney, spleen, and leg—indicates that berberin causes dilatation of the vessels in excised organs. Frogs' hearts perfused with 1 to 10,000 berberin beat more slowly and irregularly and the output is very markedly diminished.

The blood-pressure changes agree with those obtained by Phillips,[9] with the exception that no rise above normal was obtained after the fall of pressure. Although Phillips noted practically the same oncometer findings, he attributed the recovery of the pressure to stimulation of the vasomotor center.

Hydrastis contains not less than 2.5 per cent. of hydrastin (U. S. P.) and about 4 per cent. of berberin. In comparing the fall of blood pressure produced by injecting equal amounts of hydrastin and berberin, it is found that berberin causes almost four and one-half times the effect of hydrastin. Since the percentage of berberin in hydrastis is about one and a half times that of hydrastin, it follows that the effect of the berberin

9. The Physiological Action of Berberin. Med. Brief, 1906, xxxiv, 8.

in the hydrastis is about seven times that of the hydrastin. In the total effect, therefore, of the hydrastis, about 85 per cent. is caused by berberin and 15 per cent. by hydrastin.

EXPERIMENTS WITH HYDRASTININ.

Fourteen injections of hydrastinin were made on six dogs. The doses varied from 0.01 to 0.001 gm. per kilo. There was usually a short rise of blood pressure, followed by a moderate fall, and then the pressure rose above normal and was well sustained. The average rise above normal, injecting about 0.004 gm. per kilo, was 15 mm., and in several cases this rise was maintained for 15 minutes, or until another injection was made. The myocardiograms showed increased excursions on the first rise, decreased on the fall and again strengthened on the final rise. The oncometer tracing followed exactly the blood-pressure curve as shown in Figure 5.

In four of the injections there was no fall preceding the final rise of blood pressure. This effect is illustrated in Figure 6. In this tracing the upper line is the oncometer and the middle tracing is the blood pressure. Below this is the myocardiographic tracing, which had been recorded on another drum, which unfortunately did not revolve at the same rate as the blood-pressure drum, but the marked increase of the heart excursions as the blood pressure rises is evident.

Perfusion of the turtle's heart by a 1 to 1,000 solution caused immediate diastolic standstill. A 1 to 10,000

Fig. 5.—Comparing oncometer tracing (upper) with blood-pressure tracing (lower); at X injection of 0.005 gm. per kilo. of hydrastinin.

solution in 0.75 per cent. sodium chlorid caused increase in rate and force of the contractions, with a practically constant outflow.

Perfusion of excised organs—kidney, spleen and leg—while not conclusive, point to constriction of the vessels of excised organs.

Falck[4] and Ronsse[10] attribute the rise of blood pressure to peripheral vasoconstriction, while Marfori,[3] Voigt[11] and v. Bunge[12] consider the rise due to stimulation of the vasomotor center.

Although stimulation of the center has not been excluded in the present series of injections, it seems that the cardiac effects exhibited by the myocardiograms are sufficient to account for the rise of blood pressure caused by hydrastinin. The oncometer evidence is against vasoconstriction playing any important part in the rise of pressure.

CONCLUSIONS.

The most constant and conspicuous effect of the intravenous injection of hydrastis is a prompt fall of blood pressure. With small doses the pressure promptly returns to normal and there may be a slight rise above normal. With larger doses (from 0.07 c.c. to 1 c.c. per kilogram of body weight) there is only partial recovery from the fall of blood pressure or it may remain low. The pressure phenomena are attributable to depression of the cardiac muscle causing the fall and to stimulation of the muscle causing the rise. Very large doses depress and paralyze the vagus and vasomotor system; otherwise there is no evidence deduced from the myocardiograms and oncometer that the vasomotor system plays any important rôle in the blood-pressure changes.

The two principal alkaloids of hydrastis, hydrastin and berberin, cause qualitatively the same blood-pressure changes, although berberin is the more active and is responsible for about 85 per cent. of the effect of hydrastis, hydrastin causing the remaining 15 per cent.

Hydrastis given by mouth or hypodermically causes no change in the blood pressure, heart rate or respiration.

Hydrastinin—an artificial alkaloid derived from hydrastin—causes a rise of blood pressure above normal, which is usually preceded by a slight fall when injected intravenously. The rise is well sustained and is principally caused by stimulation of the cardiac muscle.

The results of this investigation do not support the

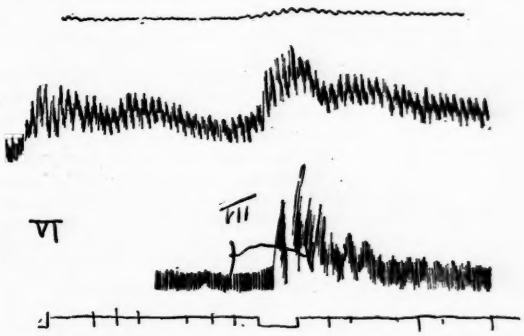

Fig. 6.—Comparing oncometer tracing (upper), blood-pressure tracing (middle) and myocardiogram (lower); at VI injection of 0.002 gm. hydrastinin per kilo; at VII injection of 0.005 gm. hydrastinin per kilo.

clinical theories concerning hydrastis. It is possible that conditions in man and in disease may modify the actions observed by me, but this is rather improbable. At least the uniform contradiction of the experimental results and clinical opinions demands that the latter be examined critically before they are accepted.

DISCUSSION.

DR. HENRY BEATES, Philadelphia, was particularly interested in the paper of Dr. Williams, because it contributes knowledge and is an individual statement of demonstrated facts. In speaking of therapeutics, as the term is generally employed and accepted, Dr. Beates can not understand how it is possible to teach the so-called therapeutics. Therapeutics, he said, is the art or skill with which an individual can apply or adjust well-established fundamental facts to presenting conditions. That art can not be taught; it is only the fundamental principles underlying this that are subject to teaching and study. Dr. Beates referred to the remark made, that we believe in free thought in medicine, just as in religion. Truth, he said, admits of no free thought; it demands compliance of the human mind with the laws associated therewith. Theology, a totally different thing from religion, appeals to the emotional and sentimental side of human character. Thus, it is comparable with therapeutics in medicine. The fundamental laws, with which means for treating disease have been established by an allwise Creator, parallel religion and demand compliance therewith on the part of the physician, and he who would be a therapeutist, as it is superficially accepted, must be a master of fundamental medical laws. Therapeutics, therefore, as misused, is the ur-

10. Arch. internat. de pharm., T. 4 et 5.
11. Kotarnin u. Hydrastinin Inaug. Diss. Leipzig, 1896.
12. Ein Beitr. z. Kenntnis d. Hydrastis canadensis u. ihrer Alkaloide, Inaug. Diss. Dorpat., 1893.

derlying cause of sectarianism in medicine, just as theology results in sectarianism in religion. It results in making faces one at another, condemning those who differ in opinion and praising those of like notion. It is, therefore, particularly refreshing to hear a paper read that contributes knowledge and fact. It leaves with the individual the exercise of free thought and is written in the best manner possible to apply this to presenting conditions. Dr. Beates said that when he hears of a person advocating some concoction, when he does not know what it may represent, and is prompted by the statements of a representative to employ it, from the point of view of therapeusis, he feels that such men are subversive to scientific progress. Exceptional results by no means establish a principle. A gentleman remarked, he continued, that because an experiment on dogs conducted with a view of proving the antidotal power of permanganate of potash proved negative, his belief was upset in the efficacy of physiologic investigation; and when this same gentleman belittled physiologic research and vivisection, Dr. Beates could not help but remember that, if he is not mistaken, the canine species can without any toxic effects indulge in quantities of morphia that would kill many individuals of the human race, and that, therefore, a statement affirmed on such premises is scientifically without any value whatsoever, indeed, positively pernicious, because it appeals to the sentimental side of those who, in ignorance, do not know to what degree they are obligated to the wonderful disclosures and discoveries of scientific truth, which vivisection alone supplies.

If a body of scientific men will adhere exclusively to presenting papers that deal with facts and fundamental principles, intelligently and scientifically demonstrated, and not endeavor to claim that with a dose of castor oil, or what not, the wonderful ego can do something that Drs. A, B and C can not do, and then avoid mistaking the Xs and Ys in the proposition, we will progress more rapidly than we otherwise can do. Such a spirit of convention, Dr. Beates said, will avoid the indulgence in invective, invidious distinction and the class of mental perturbation, which should be foreign to broad-minded, scientific bodies. Physicians will learn to conform with the stern facts of existence and definitely established laws. They will then acquire knowledge that can be utilized in many pursuits in life in which the physician is an active factor. In Pennsylvania, this year, opposition to progressive medical legislation, having in view the well-recognized corrective necessities on which laws depend, was successfully interposed by effort of the sectarians and that class who lack in knowledge of fundamental principles and scientific fact, as the weather vane is swayed and points to every breeze that wafts across its surface.

DR. GEORGE F. BUTLER, Chicago, has obtained results from hydrastis and considers it a good drug. It may, he said, prove of but little value in some men's hands and of great value in the hands of others.

DR. ROBERT A. HATCHER, New York City, felt that Dr. Williams' paper affords an admirable illustration of the fact that there are certain drugs which should be expunged from the Pharmacopeia until we have more knowledge of their value.

Diagnostic Importance of Cutaneous Reaction to Tuberculin.—Since C. von Pirquet announced last May his *Allergie* test, as he calls it, numerous communications have been published abroad on this subject of the skin reaction to tuberculin. He relates in the *Wien. klin. Wochschr.*, September 19, his experience in 100 cases in which the clinical findings were supplemented by autopsy. During the final stage the cutaneous reaction was generally negative, but in the 31 cases of clinical and in 1 of suspected tuberculosis, the cutaneous reaction was positive, while it was constantly negative in the 52 cases in which no tuberculous lesions could be discovered at autopsy. In some cases in which the lesion was very small, the cutaneous reaction was not positive until the test was repeated. His cases were all in children from 6 months to 13 years old. The test can be made more sensitive by reducing the concentration of the tuberculin, from 25 to 10 per cent. The former strength is liable to rouse up even old and inactive foci, while a weaker dilution will reveal only recent and active lesions.

THE UNITED STATES PHARMACOPEIA.*

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NEW YORK CITY.

It is not my present purpose to add to the many reviews or criticisms of the Pharmacopeia, but to call attention to two conditions, hoping that steps may be taken by this Section looking to their improvement.

The first is the general loss of interest on the part of physicians in the revision of the Pharmacopeia. The Pharmacopeia was called into being by physicians in 1820, and in 1850 pharmacists were admitted to the convention; since then physicians have gradually relinquished control to pharmacists, and to-day we are confronted with an anomalous condition, in that the committee of revision of 1900, consisting of twenty-five men, numbered nineteen pharmacists or men identified with pharmaceutic institutions, and but six whose interests were entirely with medicine. For example, Dr. Squibb was almost universally known as a manufacturing pharmacist. Only ten members of the committee of revision had the title of M.D.

This condition is not creditable to the medical profession, for it is obviously not the province of pharmacists to decide for physicians what remedies they are to use.

I do not think it is generally realized to how great an extent the medical profession has neglected its manifest obligations in connection with the Pharmacopeia, leaving the work almost wholly to pharmacists. Less than half the states had medical delegates accredited to the Pharmacopeial convention in 1900. Six states named pharmaceutical, but no medical, delegates. Ohio had three medical delegates and New Jersey had one, accredited, but not one from either state attended the convention. Besides these two great states and many of less importance, Iowa, Virginia and North Carolina were wholly without medical representation in that convention, and the following states each had but a single medical delegate: Missouri and Indiana, the fifth and sixth states in the Union in population and importance (Dr. Whelpley's interests are mainly pharmaceutical), Georgia, Minnesota, Connecticut, Nebraska, Kentucky, Tennessee and Wisconsin.

In contrast with this showing it may be mentioned that the pharmaceutical organizations of New York named twenty delegates and those of Ohio named fifteen. From these figures one may gain some idea of the preponderance of pharmaceutical over medical influence in that convention.

So far from finding fault with the pharmacists for this condition of affairs, I think their spirit is worthy of emulation, and I think they may point with pride to their share of the work. It is with the members of our own profession that the blame rests for this condition.

The second point to which I wish to draw attention is the want of a genuinely progressive spirit in the matter of admissions and dismissals. A very important object of the Pharmacopeia is to provide an authoritative list of remedial agents. It should represent all that is best in therapeutics. In order that the Pharmacopeia should command the respect of physicians in the highest degree and secure the earnest support of the leading

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

men of the profession it should, so far as possible, embrace every non-secret medicinal agent of unquestioned merit, regardless of its nature, while every article of doubtful value should be dismissed.

It is hardly necessary for me to add in this connection that I do not advocate the admission of every astringent, nauseant, diuretic, cathartic and bitter, but only of those of each type which possess distinct advantage over others in some particular condition.

If we can rid the book of all useless material and fill it with all that is best, and only the best, and maintain it at that high standard of excellence, it must inevitably command the admiration and enthusiastic support of the ablest men in the profession. For, while I recognize its imperfections and shortcomings, it seems to me that the greatest need at the present time is a strictly progressive attitude toward the question of admissions.

I shall not soon forget the fine contempt and scorn with which one of the most respected practitioners of New York—a firm supporter of the Pharmacopeia and one but little given to prescribing unofficial remedies—spoke of the admission of an "imitation of antikamnia." Is there any one in this audience who will maintain that antikamnia represented a distinct advance in therapeutics? If it did not, the best excuse for its imitation by the Pharmacopeia is still only a very poor excuse.

Is there a physician worthy of his degree who is unable to write a prescription for acetanilid and caffein? Doubtless the inclusion of this imitation antikamnia aroused the enthusiasm of many whose therapeutics are taken from the wrappers of nostrums or some manufacturer's pocket therapeutics, but for each friend so gained it lost the respect, to that extent, of such a man as the one to whom I have referred, and the good opinion of one such man is better for the cause of permanent progress than is the enthusiasm of a host of the other kind.

While this compound acetanilid powder represents the most objectionable of the admissions to the Pharmacopeia, there is another type, the elimination of which will cause much greater opposition—I refer to the many hoary representatives of obsolete or useless substances which have been retained wholly out of deference to the sentiments of a goodly number of very respectable, but not progressive, practitioners who use the remedies which their honored preceptors used before them without any definite idea of just what they expect to accomplish thereby.

The representatives of this class of substances are so numerous that I fear to mention one member lest every one present should name a better (or worse), but sarsaparilla, syrup of lactucarium, cannabis Indica and its preparations, lappa and calendula, may be cited as examples. There are numerous official substances which are not even mentioned by the standard text-books on therapeutics and pharmacology. I should be glad to have a clear and concise exposition of the pharmacology of the compound syrup of hypophosphites.

It has been argued with much reason that it was necessary to have an authoritative standard for many articles in domestic use; this argument has lost much of its force, so far as it applies to the Pharmacopeia, since the National Formulary has been clothed with legal authority, and that work should relieve the Pharmacopeia of this hindrance to its upward progress.

Another strong argument used in support of the retention of many substances which the committee of revision would hardly commend individually is based on the wishes and sentiments of many men of a great diversity of interests, education and ideas.

If we are to strive only for the best we shall be forced to do some violence to the ideas of those who, through sloth, incompetence or misfortune, are unable to keep step with the march of therapeutic progress.

It is true that the Pharmacopeia must serve a diversity of interests, all of which are represented in the direction of its affairs, but with the spread of scientific training we are coming to a better appreciation of the fact that independence is not incompatible with deference to the opinions of those better informed than ourselves, and with each revision we should approach nearer to the ideal.

With the progress of this idea it will be increasingly improbable that a substance shall be admitted to the Pharmacopeia before it has been carefully considered by competent pharmacologists and clinicians.

If we accept rational progressive therapeutics as the touchstone by which we are to decide all questions concerning admissions to the Pharmacopeia, it will be comparatively easy to eliminate most of the dead matter, and it will aid in the selection of all that represents actual progress in therapeutics.

It is imperative that effective provisions, not mere authorization, be made for additions as fast as new remedies are proved beyond reasonable doubt to possess actual merit, for more progress is now possible in one year than was made in the ten years from 1820 to 1830.

It is of almost equal importance that an official article which has been superseded by a manifestly better one should be dismissed. This would serve notice to the practitioner that the article in question had failed to measure up to the standard of the best then in vogue. There are not many who would prefer to employ a remedy so discredited if the merits of the Pharmacopeia were more generally esteemed.

Physicians will employ whatever appears useful to them, but at present we have no legally authorized guide in the matter of very many agents, and amid all the misrepresentations there is little cause for wonder that the physician should be duped occasionally, but it is remarkable how systematically, persistently and amazingly he allows himself to be cheated, humbugged and even disgraced by the wily swindlers.

If such a thoroughly progressive policy should be adopted it would place a greater burden of responsibility on the committee of revision, for on the wisdom which that committee displayed would depend the use of Pharmacopeial substances instead of the most skilfully vaunted nostrums.

Should that committee not be progressive it would leave the door wide open in the future, as it has been in the past, for the introduction of a host of compounds for each new substance which might come into deserved notice. Thus the early admission of urotropin would have done much to prevent the flooding of the market with the same product under a variety of names which added much to the confusion of the nostrum-guided practitioner.

If, on the other hand, there is not painstaking care and wisdom displayed in the selection of substances to be admitted, the good opinion of the ablest men in medicine will be forfeited.

This is exemplified by what has been said with regard to compound acetanilid powder. This also illustrates the type which has served its doubtful purpose and should now be promptly dismissed.

So great would be the responsibilities of the therapeutic committee charged with this duty that it would be necessary to have a number of men of great ability, breadth of view and undoubted integrity who could give much time to the subject, for it must be conceded that in the effort to keep the Pharmacopeia in the van of therapeutic progress the way would be left open for great scandal if the men charged with this duty were not above the least suspicion either as to personal integrity or the faithful and painstaking performance of exacting obligations.

Medical education is making such rapid strides that we have every reason to demand a higher standard of usefulness for the articles to be admitted to the next Pharmacopeia.

There are at present several well known pharmacologic laboratories in operation in charge of such men as Abel and Sollmann, and there is no excuse for the clinical use of new agents before they have been thoroughly tested on animals, and the evidence is not lacking that this branch of medical research will make considerable progress in the near future.

The great medical colleges, with their ample hospital facilities, are making strenuous efforts to secure capable clinicians—men trained to accurate observation—and their work, supplementing that of pharmacologists, can not fail, in the vast majority of cases, to possess advantages over that of the man in private practice not nearly so well situated for controlling his patients and not usually so well trained in accurate observation.

We should look to men with such advantages—clinicians and pharmacologists—for guidance in the choice of the official materia medica, rather than to the preponderating numbers entitled to representation in the Pharmacopeial convention, if we are to place the Pharmacopeia in the forefront of therapeutics.

The committee of revision was empowered to secure expert advice in matters pertaining to chemistry, and there is every reason why this policy should be so extended as to embrace the results of pharmacologic and clinical research, for many clinicians and laboratory workers are deterred from investigating proprietary remedies by the fact that notorious methods are so commonly pursued by nostrum makers in securing pharmacologic and clinical reports. I may recall to your minds the exposure[1] in THE JOURNAL of the American Medical Association of recent date of the pretended clinical study of Gude's pepto-mangan in anemia by Mateo M. Guillen at the City Hospital on Randall's Island.

Fortunately for all interests concerned (except those of the nostrum maker) the reaction against the truly disgraceful condition which has prevailed in therapeutics, and which had grown steadily and rapidly worse, has resulted in the awakening of physicians to the importance of the Pharmacopeia, and it is becoming much better known to the medical profession. Owing to this increasing interest in, and popularity of, the Pharmacopeia there should be a large sum available for research in the preparation of the next revision, and it may be considered as certain that any expenditure in that direction will yield a return many times greater than the expense incurred.

If the reaction is to gain impetus we must arouse in physicians a livelier sense of responsibility in the matter of revision. This was argued by Mr. Wilbert in a paper[2] presented to this Section a year ago, and I can do no better than to reiterate what he said then.

It must come to be considered a distinction, a privilege and a duty on the part of delegates to be present and to participate actively in the deliberations of the Pharmacopeial convention.

That this has not been true in the past is shown by what has already been said and by the fact that of the physicians actually named as delegates to the convention in 1900 more than fifty failed to attend. Indeed, it may be safely stated that less than one-tenth as many medical delegates participated in the deliberations as would have been eligible had a proper interest been aroused.

This Section and its officers can not escape just censure if no steps are taken to prevent such a wholesale neglect of duty on the part of pharmacologists, at least at the time of the next convention.

Despite all of this indifference on the part of physicians, many of whom know practically nothing of the Pharmacopeia, its origin and its many excellent features, we constantly hear them sneer at its imperfections.

The American Medical Association can use its vast influence to no better purpose than in getting the best men in medical circles to give heed to the claims of the Pharmacopeia on their interest and their efforts. Then, and only then, will it cease to be the fashion to sneer at the defects of the work—but rather will it be held in the highest esteem as representing the best in medical, even as it does now in pharmaceutical, circles.

414 East Twenty-sixth Street.

1. THE JOURNAL, April 6, 1907, p. 1197.
2. THE JOURNAL, Dec. 15, 1906, p. 1989.

DISCUSSION.*

DR. J. P. REMINGTON, Philadelphia, thinks that every one will admit that the medical profession has been grossly negligent of its duties in the past, although the physicians who were members of the Committee of Revision of the Pharmacopeia did their duty. He said that it is a common thing nowadays to "take it out of the Pharmacopeia." If any man wants a subject for discussion, and one which he can hit with safety, there is always the Pharmacopeia. The authors of the papers, he said, failed to make any definite charges; they were condemnatory in only a general way: "The names are too long; the average doses are good for nothing; the work is ancient and antiquated, and it pleases but a very few physicians; the compound syrup of hypophosphites is an abomination; physicians do not buy or use it," and so on. Dr. Remington quoted one of the speakers as having said that there were nineteen pharmacists and six physicians on the committee. As a matter of fact, some of the men on the committee were pharmacists who were also graduates in medicine so that the number of physicians and pharmacists was almost the same. Dr. Remington also emphasized the fact that the United States Pharmacopeia is made for the United States of North America. It is more important that the Pharmacopeia be recognized as an authority and used by the country doctor who is not a professor in a medical college, than by a professor in a college, because the professor knows more of the study of pharmacology than the country doctor. Physicians, he said, want a preparation on which they can depend, and of which they know the ingredients. They want something which is non-secret. By placing tables of incompatibles after each article the Pharmacopeia, he asserted, would be larger than the dispensatory.

DR. WARREN B. HILL, Milwaukee, Wis., a member of the 1900 Committee of Revision of the Pharmacopeia, said that some doctors on the committee were eloquent, but the pharmacists would not heed them because they were doctors. The medical men are so outnumbered that anything they had to say was absolutely useless. Dr. Hill said that he himself had the temerity to say that he wanted to show the committee what

*This discussion, which took place after the article by Dr. Hatcher, has more or less reference also to the four papers read previously (by Drs. Wood, Remington, Hallberg and Osborne).

the doctors needed, and he was told: "We don't care what the doctors need. This is a book made by the druggists for the druggists and we don't care what the doctors need." This altercation was expunged from the records. Dr. Hill urged that physicians be stimulated to greater interest in the Pharmacopeia. Medical societies do not know the importance of representation. By sending good delegates from each state and society to the next convention, it may be possible to influence the druggists. A matter to be considered, however, is whether the Pharmacopeia should be a little book—a text-book, as it were—for the use of the doctor and the medical student, or a larger book, one to be used only as a reference book. Dr. Hill believes that it should be a large book, a reference book, one that could be used anywhere. That would be the kind of Pharmacopeia best adapted to the needs of the country, and, then, by making a syllabus or brief of it, the other purpose might be carried out also.

DR. WILLIAM J. ROBINSON, New York City, said that he long ago concluded that 99 per cent. of all quarrels and disagreements originate in misunderstandings. And this, he thinks, is well illustrated by what Professor Remington said, because if he had listened carefully to the report of the committee, he would not have made the statements he did. Dr. Robinson said that there is no desire to make a smaller Pharmacopeia for the pharmacist. So far as the pharmacist is concerned, the Pharmacopeia may be as big as the dispensatory; but it should be made more attractive to the physician, more available for his uses. The physician is not interested in the process for making spirit of nitrous ether; he does not care to know the assayed process for determining the amount of strychnin and extract of nux vomica in the crude drug, nor does he care to know how to detect impurities in various chemical salts. All this is entirely out of his sphere. What he does care to know is the general appearance of the drug or chemical, its solubility, its average dose, its antitdotes, and its most common incompatibilities. And this is what the Pharmacopeia should give to the physician. If one book will not do for both pharmacist and physician, then a special abstract should be made for the physician's use.

DR. OLIVER T. OSBORNE, New Haven, Conn., thought the points made by Dr. Robinson were well taken. As to members on the Committee of Revision, he said that the mere title of M.D. has nothing to do with it. It is practicing physicians that are wanted. The question is, What is the man doing with his M.D.? If he is connected with a pharmaceutical concern he is not in practice. Dr. Osborne commended the report received from Professor Remington from the Pharmaceutical Association.

DR. HENRY R. SLACK, La Grange, Ga., feared that Dr. Hill created a wrong impression by not qualifying his statment. The discussion, he said, was on the question of doses and whether medicinal properties should be mentioned in the Pharmacopeia. A professor of chemistry in one of the colleges stated that the object of the Pharmacopeia was to furnish the pharmacist with a book by which he could make his drugs and test them, and that it was not intended to teach therapeutics and materia medica to the medical profession. It was not intended to be a treatise on therapeutics. To say that the physicians had no voice in this, Dr. Slack said, is not exactly correct, because no man wielded a greater influence in that convention than Dr. H. C. Wood of Philadelphia.

DR. GEORGE F. BUTLER, Chicago, said that the Pharmacopeia is not intended for any other purpose than to furnish a reliable authority for the purity of drugs and the proper preparation of pharmaceuticals. It is not so much a book for doctors as for druggists. When a certain remedy is prescribed it must be pure and properly prepared. The Pharmacopeia is chiefly a receipe book for the druggist, and never can be anything else. Dr. Butler agreed with Dr. Hatcher that all drugs should be tested pharmacologically on animals, but the results should be corroborated on sick human beings. The mere fact that a drug produces a certain action on a dog is no reason why it should produce such an effect on a sick person. It is, after all, the remedies doctors have used clinically, and from which they have derived good results that should find a place in the Pharmacopeia.

DR. H. G. PIFFARD, New York City, one of the members of the Committee of Revision of 1880, said that the discussion so far is almost a repetition of the discussion which occurred at the meeting of the Committee of Revision for 1880. He was chairman of the subcommittee on titles. After a year's labor a report was agreed on. More than two-thirds of the report was cut out by the action of the pharmacists led by Dr. Squibb. Dr. Charles Rice, he thought, stated the matter clearly when he said that the doctors should say what kind of drugs they want and the pharmacists should decide the best means of preparing them.

DR. J. J. TAYLOR, Philadelphia, called attention to the three drugs which Dr. Hatcher would exclude from the Pharmacopeia. One of them was cannabis indica. He felt that the practicing physician would be willing to drop everything official, if he could but have cannabis indica. Cannabis indica is probably dearer to the heart of the doctor than to that of the pharmacist, because of the extreme pharmaceutical difficulties in its manipulation. The crux of the matter is, he continued, that the physician who has been in practice a number of years, when he takes up the Puarmacopeia and finds that the majority of his favorite drugs are out of it, has but little, if any, further use for the book. So that, in his opinion, the drugs we have been accustomed to using with good results should with great hesitation be eliminated from the list.

DR. M. CLAYTON THRUSH, Philadelphia, said that it must be remembered that the Pharmacopeia was never intended to be a text-book. It is simply a standard for the identification and purity of certain medicinal products. It is the Pharmacopeia of the whole United States, and no matter how many preparations are added, it will not please everyone. It is impossible to satisfy all, for what is popular in one section of the country is practically obsolete in another. The committee is trying to adopt preparations that will satisfy the majority of the profession. Dr. Thrush commended Dr. Osborne's suggestion, that when the next committee meets, there should be on it an equal number of physicians and druggists. It is the physician's duty, he said, to select the preparation he prescribes, and it is the pharmacist's duty to prepare it.

MR. M. I. WILBERT, Philadelphia, asked why, if the Pharmacopeia is the Pharmacopeia of the United States, should it not be restricted to drugs that are used in the United States, and why should it include drugs used only in one particular section of the United States? If drugs that are not widely used can be demonstrated to have advantages, they will soon be more widely used and will then be eligible for inclusion in the Pharmacopeia. Mr. Wilbert claimed that if the Pharmacopeia can be brought to the attention of every practicing physician in this country, it will prove to be the greatest educator that they have ever had, and that, after all, appears to be the greatest use for or the most important function of the Pharmacopeia.

DR. J. P. REMINGTON declared that the physicians of this country do not quite grasp the fact that the U. S. Pharmacopeia is the law of the land, and that its first valuation and its greatest function is to provide a standard for purity and for strength, and that while it is of use to the physician in the matter of providing a standard for the Food and Drugs Act, there is no other book that the U. S. Government relies on to provide a standard of purity for drugs but the Pharmacopeia. If average doses can be provided, the physician should say what the average dose is. Dr. Remington hopes that the American Medical Association and the Section on Pharmacology and Therapeutics will have a splendid record, and that it will be the report that will go into the next convention and that medicine will be well represented. After the Food and Drugs Act passed and was signed by the President, Dr. Remington received many letters from manufacturing chemists offering criticism, because for the first time in 100 years the Pharmacopeia touched their pocketbooks. Dr. Remington asked them to get together and give the Committee on Revision a report of what they wanted. They did so, and the work of correction and addition has been easy. With the approval of the Bureau of Agriculture in Washington, the Secretary of the Treasury and the Secretary of Commerce and Labor, the committee had to make some corrections in the

Pharmacopeia in order to make a book on which prosecutions can be based. Dr. Remington pointed out that the very fact that one can get from any drug store in the United States an unadulterated potassium iodid or bromid, or anything in the Pharmacopeia, is a tremendous advantage to the medical profession. The medical men in the last Committee on Revision were given entire charge. Dr. Squibb, Dr. Hare and Dr. H. C. Wood were on that committee, and while Dr. Lyon of Detroit is an analytical chemist, he is also a physician. A report from the American Medical Association, he said, would certainly receive respectful consideration, and will stand a very good chance of being adopted because it comes from the American Medical Association.

PROF. HENRY KRAEMER, Philadelphia, said that he was pleased to witness this awakening on the part of the medical profession. He agreed to the fundamental principle enunciated by Dr. Charles Rice, that the members of the medical profession should select the substances which enter into the Pharmacopeia, and that the pharmaceutical profession should provide the descriptions of these substances, necessary tests, and methods for making preparations. With the work thus apportioned, there is not the necessity for an equal numerical representation of the two professions on the Committee on Revision. He feels that five or six medical men on the committee would be sufficient to represent the interests of medicine. This number would constitute a large subcommittee.

DR. FRANK M. READE, Richmond, Va., believes that the work of revision of the Pharmacopeia has been most excellently done by the pharmacists and chemists; and that the bad work, if there is any, has been done by physicians. They have failed to show what physicians want. The pharmacists have done their work well. They have provided tests for purity, and they have provided standards which have been adopted by the U. S. Government. They have given physicians that which enables them to get medicines from any drug store where medicines are dispensed. Dr. Reade suggested that the Section on Pharmacology should appoint men on the next Committee on Revision of the Pharmacopeia who will indicate what physicians want. The other men have shown that they will do their part as it should be done.

DR. C. S. N. HALLBERG, Chicago, said that the Pharmacopeia has always assumed the position to the medical and pharmaceutical profession that the statutes do to the profession of law. Since it has become a legal standard, it has assumed that position fully because it is now a law, and being legal it must be simply a code and statute. Nothing extraneous should be added because it may not be desirable. Dr. Hallberg defined the Pharmacopeia as being a book which provides standards for the identity, purity, quality and strength of drugs, chemicals and medicinal substances, and gives directions for the preparation and valuation, compounding and preservation of these substances. The Pharmacopeia can not go into all the details that every one wants. With regard to the doses, comparing these doses with those given in the works on materia medica, Dr. Hallberg said that quite a discrepancy will be found. The doses in the Pharmacopeia, of the pharmaceutical preparations, that is, the preparations from drugs, approach mathematical correctness. Thus, for example, if the dose of opium powder is 1 grain, the dose of the tincture of opium containing 10 per cent. of opium is 10 minims; but it is put at 8 minims as equivalent to 0.5 c.c. The doses of the extracts and tinctures in the dispensatories and in similar works often have been designed without reference to their drug-strength. In some instances the dose of the drug and of the extract is the same, though the extract is from four to five times the strength of the drug. These discrepancies pharmacists endeavored to correct in the last revision of the Pharmacopeia. The Pharmacopeia of the United States assumes more nearly the character of an international pharmacopeia than any other. Physicians of every school in the world practice here. Their wants have to be regarded. The pharmacists of the Philippines have the right to demand that some of the medicines they use shall be incorporated in the Pharmacopeia of their country. Porto Rico is also entitled to consideration in the Pharmacopeia of the United States. Dr. Hallberg believes the plan proposed by Dr. Remington a good one. There ought to be a list of drugs that are really being prescribed by physicians in this country. The pharmacists can secure statistical reports between now and the Decennial Convention of perhaps a million prescriptions distributed throughout various parts of the United States. The convention on assembling would know what articles are used sufficiently to warrant their retention in the Pharmacopeia.

DR. ROBERT A. HATCHER, New York City, stated that his plea was that more interest in the Pharmacopeia be manifested on the part of the physician, not because six instructed men are not sufficient—one instructed medical man, if he had the instruction after thorough discussion by the medical bodies of the United States, would be sufficient. It seems incredible, he said, that in the entire state of Ohio there was not one physician to make a plea for the profession; not one was instructed to make it. If, he said, the country doctor is as benighted as some of the representatives of two cities in the eastern part of the United States, which he could mention, God help the country. He believes in making clinical tests of drugs, and, if possible, pharmacologic tests. He teaches his students that they must under no circumstances accept a pharmacologic test as final, as in the use of quinin, for example, but that the final test is the clinical result.

EVACUATION AND DEPLETION OF THE TYMPANIC CAVITY AS AIDS TO DRAINAGE IN ACUTE MIDDLE-EAR SUPPURATION.

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Notwithstanding the numerous advances in pathology and surgical technic which have, as it were, crystallized into a definite form represented by the modern simple mastoid and radical operations, the question of the minor surgical procedures in acute otitis, and the detail of their application, is still as open now as was a few years ago the question whether or not they should be applied at all. As a matter of fact, acute otitis media is to this day considered a self-limited disease with typical, cyclical course and critical defervescences like pneumonia, by no less an authority than Zaufal. His school, in common with other German otologists, has statistics to show or, more properly, to make it appear, that spontaneous perforation is preferable to that made by the knife, that paracentesis is generally unnecessary, and that the results of expectant treatment are at least equal to those obtained by early surgical interference. The fallacy and the folly of these views need not be pointed out to American otologists, nor need they be reminded that the conscientious surgeon will not be consoled by any percentages for the loss of a single life through needless waiting when a simple, safe and rapid procedure would have averted the danger of death. Anyone who has seen acute otitis involve the mastoid in a virulent process over night and lead to death in less than twenty-four hours, in spite of operation, or who has seen meningitis develop in a child in less than a day after the initial symptoms of pus retention in the tympanum, will take with a more than usually large grain of salt any suggestion for the treatment of acute purulent otitis media which fails to take into consideration the vital and essential facts that this process is one fraught with the most ominous potentialities for mastoid bone disease, cerebral or meningeal infection, general sepsis and death. Delay is more dangerous in this particular disease and in this region than in any

other of which we know; prompt action may mean the saving of a life, while even if mistaken and unnecessary in a given case, paracentesis with a clean knife can do no harm to the patient.

A method which condemns a child to days and nights of suffering and danger while the surgeon is watching and waiting on the theory that the disease is self-limited, and failing to take the evident measure for relief, is itself to be unsparingly condemned as inhuman and unscientific. It has been objected that we are not always able to make a positive diagnosis of the presence of pus in the tympanic cavity, and the answer is that positive assurance is not required. In the presence of symptoms pointing to a middle-ear inflammation, whether or not the local signs of inflammation, of bulging of the drum, are definite or not, free paracentesis is indicated, not only as a curative but as a diagnostic procedure. The knife cures the condition it reveals. It is not necessary to find pus. As a matter of fact, which is too often overlooked not only by the general practitioner but by many otologists, we open the drum in acute otitis to prevent the formation of pus as much as to aid its escape. In the majority of cases in which paracentesis has been performed soon after the onset of definite local and systemic symptoms it is found that there is no pus in the tympanic cavity. The escaping fluid is generally blood-tinged serum with a few small flakes of pus not infrequently mucoid, while occasionally it may be frankly purulent. The fluid evacuated by the usual paracentesis is small in amount, while the discharge rapidly increases so that on the following day it is usually copious and undoubtedly purulent. This change in the character and amount of the inflammatory matter does not by any means imply that there was no pus infection present before the drum was opened, nor can it be twisted to suggest an infection of the middle-ear by the surgical procedure, as the occurrence is too uniform even in the experience of skilled and conscientiously aseptic otologists to admit of such interpretation. The opening up of the middle-ear and establishment of a connection with the outer air does seem to hasten the formation of pus and the *modus operandi* is not clear. As we have to deal with an infected mucous membrane it might appear that the primary engorgement was followed by a certain relaxation and breaking down of superficial tissues and increased transudation from the surface capillaries incidental to the relief of high tension in the tympanic cavity and its walls on the opening of the drum and the evacuation of fluid. The effect of free paracentesis on pain and fever, or even more ominous symptoms, no matter how inadequate apparently to account for the symptoms the amount of retained fluid may be, is marked and generally immediate. The lesson which this observation, made again and again, should have taught us unfortunately has still to be impressed. It should be recognized that the tension itself is almost as great a danger as the retention of exudate, congestion as much to be feared as pus, and our therapeutic procedures should aim not only to remove the inflammatory accumulation but to reduce the hyperemia, establish free drainage and prevent the reaccumulation of inflammatory matter. Relief of tension and the establishment of free drainage are the two main points in the treatment of acute otitis. How are they to be assured?

It is hardly necessary to go into the question of the technic of paracentesis, although, simple as that procedure is, it is often badly done. The needle, fortunately, has been superseded almost everywhere by the knife. We do not puncture, but slit the drum, preferably from below upward and throughout its entire extent, in the posterior quadrant, paying no attention to localized bulging (except it be in Shrapnell's membrane) or even to the absence of decided bulging. A Graefe cataract knife is an ideal instrument for this little operation. The incision may be carried out through the upper part of the drum into the upper wall of the external canal in case the symptoms are unusually severe, or the fundus changes indicative of intense reaction or of involvement of the deeper parts of the canal. Even a free incision may become agglutinated and have to be repeated. Bacon has called attention to the fact that the discharge in influenzal otitis is apt to be sticky at first, and that the tendency is for the opening in the drum head to be closed early, and accordingly advises not one but several incisions in the ear drum. An incision which will invariably remain open will probably always remain a *pium desiderium*, as there is evidently no means short of the excision of a portion of the tympanic membrane which will inevitably and invariably assure a permanent opening.

I called attention several years ago,[1] and on more than one occasion since,[2] to a method which not only tends to prevent premature closure of the paracentesis wound, but also aids drainage in the most efficacious way, and thus prevents infection of neighboring cavities and the spread of the intratympanic suppuration so effectually that during the last few years I have hardly ever seen a case of mastoid disease develop under my observation. The method, that of aspiration or suction-drainage of the tympanic cavity after paracentesis, is simplicity itself and requires, as stated in my previous communications, merely a small glass bulb or irrigating tip, a wisp of sterile cotton to be placed in the neck of it, and a foot or so of thin rubber tubing. Immediately after the drum has been opened the bulb is inserted in the meatus and vigorous suction applied. It is remarkable what an amount of inflammatory exudate is drawn up into the bulb by this procedure, even in cases in which after paracentesis there was only a very scanty spontaneous flow. Not only is the tympanic cavity freed of any fluid already accumulated there, but there is, in addition, a marked depletion of the mucosa with a corresponding lessening of vascular tension and hyperemia in the neighboring accessory air cells of the mastoid. I have pictured this procedure as a leeching or internal cupping, and this analogy is a close one. It is diametrically opposed in therapeutic mechanism to Bier's method of congestive hyperemia, which, as I have already pointed out, is fraught with danger for an organ with such peculiar vascular relations and susceptible neighboring structures as the ear. I need only refer again, on this occasion, to the fact that stasis acts centrifugally (from the affected area or infected point) damming back and spreading out not only the circulatory changes but also the infectious products and the micro-organisms which produce them.

Aspiration, on the other hand, tends to draw into the affected area and through it into the external world, in the case of a lanced ear-drum, the accumulated matter and the infectious exudate, besides depleting the affected tissues and reducing vascular tension and hyper-

1. Treatment of Acute Otitis Media in Childhood. Amer. Jour. of Surg., May, 1905.

2. Aspiration of the Tympanic Cavity after Paracentesis. Med. Record, March 3, 1906; Aspiration of the Tympanic Cavity in Otitis Media; Annals of Otology, September, 1906.

emia over a large area. It thus accomplishes all that Bier's method aims to effect without the dangerous features of the latter, and is neither obnoxious to the patient nor irksome to the surgeon. This certainly can not be said of a method which requires the application of a constricting band to the neck day after day for hours at a time. In addition to the mechanical removal of accumulated fluid and the depleting effect, aspiration is a valuable aid to antisepsis. The removal of matter allows the secretion to flow out of the ear or to be removed more easily, the thinning of the contents of the middle ear by suction brings into play the agency of fresh serum, while, finally, we have the factor of the reduction in number of pathogenic micro-organisms by the aspiration. The incision in the drum is easily kept open if aspiration is performed, and it may be used to reopen a drum which has become agglutinated. I have never found it necessary to make multiple incisions. Aspiration alone will insure drainage, the most essential, invaluable and indispensable factor in acute otitis media as in all purulent processes.

No other measures but those of cleanliness are required. I have the ear irrigated frequently with hot solutions of mildly antiseptic action, such as Thiersch's solution 0.5 per cent., creolin 0.2 per cent., or plain soap suds. The action of these irrigations is mainly and avowedly mechanical and also tends to prevent thickening of the secretions by drying and consequent interference with drainage. This point is an important one, often overlooked by those who recommend measures for the treatment of purulent otitis which involve not only the thickening of secretions in the middle-ear but mechanical interference with drainage as well. As a type of the former procedure I may mention the insufflation of powders into the canal in the presence of an acute purulent process in the middle-ear. An example of the latter procedure is the insertion of gauze wicks and drains (*sit venia verbo*) into the external meatus, by which that natural drainage tube is converted into a tampon soaked in pus.

The conditions for free drainage afforded by the external auditory canal are ideal, and any attempts to improve them are not only illusory but defeat their own ends. Insufficient drainage is never due to conditions in the canal but invariably to the state of affairs in the tympanic cavity, the size, position or permeability of the opening in the drum, and it stands to reason that these conditions can not be affected by measures which stop short of the middle ear, and in practice, at all events, do not even reach the drum. For there can not be much doubt of the mechanical difficulty, not to say impracticability, of inserting the end of a gauze drain into the paracentesis opening, and yet this is seriously laid down as a step in the "drainage method." The drain can, however, be crowded up against the drum, and here it lies, stopping up the paracentesis opening and damming back secretions. Immediately after paracentesis there is a large admixture of blood with the fluid evacuated. This is apt to clot, and if a tampon is used retention is still more apt to occur. This also applies to the sticky secretion which is not only found, as mentioned above, in the otitis of influenza, but may be present in the more common types of middle-ear suppuration. The occlusive drain accomplishes two purposes, but they are not those of drainage and antiphlogistics claimed for it by its adherents, but rather acts as an occlusive bandage and as an infected poultice. Even if this drain is changed three or four times a day, which will require the services of a nurse, there is no guarantee that retention will be avoided. Secretion from the middle-ear is often so profuse as to render such a reliance entirely visionary. Syringing is grateful to the patient, keeps the ear clean and free from discharge for some time, and can be entrusted to the patient or to some member of the family after one or two demonstrations. After the acute symptoms have subsided and the secretion has become less profuse and thick, the antiseptic solution may be changed for a slightly astringent one, such as zinc sulphate, 0.5 per cent., or a solution made by adding pulvis antisepticus (N. F.) one dram to a pint of water. This will prevent swelling of the canal and check any tendency to the formation of granulation tissue in subacute cases. Eczema of the auricle and external meatus may be caused by irritating secretions, and possibly by repeated syringing, especially with too highly concentrated or too hot solutions. This may be avoided by carefully drying the skin and applying a little zinc oxid ointment after each irrigation.

Since making a routine measure of aspiration after paracentesis and recommending it to my colleagues in general practice by word of mouth whenever it was possible, I have been gratified by the rapid recovery of patients with acute otitis media and by the marked infrequency of mastoid involvement, as well as by the general interest taken in the method, as evidenced by the receipt of numerous letters and inquiries for details of the *modus operandi* and the apparatus, if one may dignify by this name the glass bulb and rubber tube, used by me in aspiration of the middle-ear.

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Special Article

TRAVEL NOTES FROM SOUTH AMERICA.

NICHOLAS SENN, M.D.
CHICAGO.

(*Continued from page 1771.*)

IX. THE MEDICAL PROFESSION AND HOSPITALS OF VALPARAISO.

The terrible earthquake of last year has had no effect whatever in checking the business interests of Valparaiso or the commercial importance of its port. Business is being conducted on as large a scale as before the earthquake, and the mercantile fleet in the open harbor is as large as it was at any time before the disaster. The people have become accustomed to the little shocks and tremblings of the earth, and go about their business as unconcernedly as though the foundations of the city had never been disturbed. There is always a certain fascination about danger zones, and repetitions of the same phenomena or occurrences create a sense of security and a contempt for danger. The city has now, as before the earthquake, about 150,000 inhabitants.

The number of physicians is 140, a large number, when we take into account that nearly one-half of the population can pay very little, if anything, for medical treatment. Overproduction of medical men is here, as in all South American cities, one of the most conspicuous social abnormalities. Office consultations are paid for at the rate of 5 to 10 pesos ($1.25 to $2.50), and there are only a very few men whose professional income will amount to 30,000 to 40,000 pesos ($7,500 to $10,000) a year. Although there are 140 individuals in the city who make the practice of medicine their vocation, there is not a single medical society, and I fear that only a very few of the practitioners take any interest whatever in the national association and the only medical journal published in the country.

Among the most prominent practitioners of the city with whom it was my privilege to make a pleasant personal acquaintance are Dr. Olaf Page, who has practiced here for more than thirty years, and who was surgeon general of the Chilean army during the war with Peru; Dr. Alfonso Klickmann, born in Chile of German parentage, but educated in Germany, who was major surgeon during the war with Peru, and brigade surgeon during the rebellion of 1891; Dr. John Trumbull, a highly resepected and able physician; Dr. Juan Carlos Atkinson, a young surgeon; Dr. Guillemo E. Münnich, recently appointed surgeon to the German Hospital; Dr. Konrad Fiedler, a prominent surgeon, and Dr. Oscar Jensen, house physician to the German Hospital. All of these gentlemen speak the Spanish, English and German languages, and Dr. Page is in addition a good Italian scholar.

HOSPITALS OF VALPARAISO.

None of the hospitals of Valparaiso is modern, but, considering the impoverished condition of the country, severe criticism would be out of place. The South American people do what they can for the many sick poor, and that is all that can be expected of them. I have reason to believe from what I saw and learned in the different cities, that charity is only too often abused, and that many of the patients who occupy free beds ought not only to pay the hospital for the care they receive, but also for their medical and surgical treatment. As is everywhere true, the universally charitable disposition of the true physician, and the willingness of charitable institutions to aid the poor, are only too often taken advantage of by persons abundantly able to pay for hospital care and medical treatment. I was informed that after the earthquake the physicians of Valparaiso worked night and day for weeks and months without adding a peso to their bank accounts.

HOSPITAL SAN JUAN DE DIOS.

This was the largest hospital in Valparaiso before the earthquake. The main building, a large, square one-story brick structure, collapsed and remains in ruins. A beautiful little public park in front of it was devastated by the fire which followed the earthquake. The remains of a little artistic bridge and statues, and the charred stumps of the trees which ornamented it, are gruesome reminders of the conflagration which fed on the ruins of the earthquake. The main building was located at the foot of a steep hill, and the pavilions on the hill and around the ruins now furnish the hospital space. Crippled as it was by the earthquake, the hospital has now 450 beds, all of which are occupied. One large pavilion on the brow of the hill serves at present as a naval hospital and is in charge of a naval surgeon. The little chapel has been converted into an operating room. The altar and sacred pictures have given place to an operating room, and the implements and articles for surgical operations in the dim light of the former place of worship. The care of the sick is in the hands of 26 Sisters of Charity, female helpers, and orderlies, all of whom know little about nursing and much less about the preparation for surgical operations. The surgeons are obliged to prepare their patients, and must get along the best they can in their operations with an orderly as an anesthetizer. The sisters never show themselves in the operating room.

Dr. Atkinson enucleated suppurating inguinal glands without any assistance from any source, and I appreciated then, more than ever, the difficulties with which surgeons have to contend in hospitals where there are no trained nurses. I was wondering what he would have done if, by accident, one of the large blood vessels had been injured, since the hemorrhage was unnecessarily profuse without such a mishap, as he was obliged to grasp all the bleeding points and tie them without assistance. Dr. Page is chief surgeon of this hospital, and received his check for 40 pesos ($10), his monthly salary, at the time of our visit.

This hospital takes care of the sick prisoners in a ward guarded by an iron door with a sentry stationed outside of it. Every bed was occupied by a low grade of human being, whose very face betrayed his criminal disposition and perverted nature. Every available space in the hospital is crowded, and not much can be said of the neatness and cleanliness of the institution. There would be little inducement to serve in the capacity of surgeon in such a hospital if it were not for the consciousness of doing something for the sake of charity.

Among the interesting cases I saw here was that of a man, 62 years old, who had been operated on a week before by Dr. Page for cancer of the breast, with extensive infiltration of the axillary glands. The large wound looked well, but it was well he drained, as at several points suppuration had commenced. Another patient was operated on seven days before for a perforating gunshot wound of the abdomen. Abdominal section revealed three perforations of the small intestine, which were closed by suturing, and the patient was in a fair way toward speedy recovery, showing that sometimes the great triumphs of surgery are achieved under the most trying difficulties.

SAN AGUSTIN HOSPITAL.

The second general hospital of Valparaiso is the San Agustin, with accommodation for 400 patients. This hospital is in charge of 16 Sisters of Charity of St. Vincent de Paul. This institution also was seriously damaged by the earthquake, but no lives were lost. It is a three-story building, constructed of brick and stucco, and is so arranged that the wards open on two large courts which have been converted into little garden parks. The arched inner galleries are very long, and impart to the building a cloister-like appearance. Both walls and arches were badly cracked by the earthquake. The interior of the wards and the operating room are far superior to those of the San Juan de Dios Hospital, but are far from being modern. Mrs. Juana Ross de Edwards, a wealthy widow, intended to build this hospital and pay for it out of her own private fortune, but became displeased with the plans, and finally donated the grounds, worth $50.000, and $12.500 in cash, and left the sisters to do the rest. This hospital has a number of private rooms in the most desirable part of the building, for which patients pay $2.50 a day. The rooms are plainly furnished but comfortable, and well lighted and ventilated. The hospital was completed in 1891, and the first patients to occupy it were 2,400 sick soldiers in charge of Brigade Surgeon Klickmann, on their return from the revolutionary war.

MATERNITY AND TRAINING SCHOOL FOR MIDWIVES OF THE SAN AGUSTIN HOSPITAL.

The best feature of the San Agustin Hospital is its maternity department with 50 beds. This part of the hospital is managed in accordance with modern methods calculated to prevent puerperal infection. The training school was organized two years ago. The first year's class numbered twenty pupils, the second year's sixteen, and the whole number in attendance at the present time is 36. Two graduate midwives of the Santiago school attend to the normal labor cases, and give the pupils their practical training. Dr. Espic is director of the school, and associated with him in attending the maternity cases and as instructor is Dr. Tillmanns, a graduate of a German university. The midwifery course occupies three years, at the end of which time the pupils are examined by a commission sent by the Medical College of Santiago, and to those whose examination is satisfactory, licenses to practice midwifery are issued. Educated midwives are a necessity in Chile, as many of the people are too poor to employ a physician for labor cases. Thirty pesos ($7.50) is a large fee for a midwife in a labor case, and in the great majority of cases the fee is very small. Well instructed in the asepsis of midwifery, these women are a great benefit to the communities in which they practice their art. The gynecologic department of the hospital is in charge of Dr. Tillmanns, is well conducted and the little operating room is fairly well equipped and well adapted for aseptic work. Dr. Tillmanns showed me a number of patients on whom he had recently operated for myofibroma, ovarian cysts and pyosalpinx. All were doing well.

GERMAN HOSPITAL.

This hospital, built and supported by the many Germans who live in Valparaiso, is the best one in the city. It is situated in one of the many charming ravines which indent the hillsides high above the level of the business portion of the city. It is surrounded by a charming flower garden, shaded

by pretty evergreen trees. It was built twenty-eight years ago, and has been enlarged from time to time as the need for more space increased. It is supported largely by a society of Germans, 300 to 400 in number, each of whom pays 25 cents a month, and in case of illness is entitled to admission, care and treatment without further expense. The present capacity of the hospital is 35 beds. The main building and wings are two stories in height, with wooden flooring. The hospital has a number of very comfortable private rooms, for which a charge of $2 a day is made, and 75 cents a day for accommodation in small wards of two or more beds.

Dr. Münnich, a graduate of the University of Breslau, a very able young surgeon, has recently been appointed attending surgeon, and Dr. Jensen, house physician. Dr. Fiedler and Dr. Klickmann send their private surgical patients to this hospital, as they prefer to operate here rather than in either of the two general hospitals that I have described. The doors of the hospital are wide open for private patients sent there by any of the physicians of the city. Although the hospital is German in name, and is largely supported by the membership fees of the German residents of the city, the majority of the patients admitted belong to other nationalities.

I was astonished to find that this hospital has no trained nurses. The nursing is in charge of natives, young men and women who from practice, have picked up what knowledge they possess, but who can not be relied on properly to prepare patients for operation, to render assistance during operations, or to take care of critical cases. It is high time that this hospital should establish a training school for female nurses, as the best physicians of the city would be its best friends and supporters.

The two operating rooms, one for aseptic, the other for septic cases, are small, but well supplied with instruments and facilities for carrying out antisepsis and asepsis. I found Dr. Fiedler operating on a case of pyemia which developed during the course of a suppurating bubo of the groin. A large abscess appeared in the left clavicular region. When the abscess was incised, the clavicle was found to be denuded of periosteum. Other abscesses in different parts of the body had been incised previously. The thrombophlebitis in the neighborhood of the original focus of mixed infection had given rise to this complication. Dr. Klickmann showed me a patient on whom he had operated several weeks before for appendicitis. A few days after the operation intestinal obstruction occurred. The abdomen was again opened, and a part of a loop of small intestine was found to be gangrenous. This was incised and anchored in the wound. Dupuytren's clamp was later employed to restore the normal fecal circulation, with a view to heal the intestinal fistula, and from present prospects the operation promises to prove ultimately successful. He also showed me a man, 67 years old, on whom he had performed a high amputation of the thigh, followed by primary healing of the wound and great improvement in the general condition of the patient. Dr. Page was formerly the chief surgeon of this hospital, and his picture in the uniform of surgeon general of the Chilean army graces one of the walls of the main office.

In walking through the wards of any of the Valparaiso hospitals, one is reminded of the fact that he is in the southern temperate zone, as he looks in vain for tropical diseases. Tuberculosis, bronchitis, pneumonia and rheumatism figure largely in the hospital statistics and in the private practice of the physicians. Malaria, so common on the east coast, is very seldom contracted on the west coast. Dysentery shows in the same latitude as north of the equator, and is followed not infrequently by abscess of the liver. Venereal diseases, so common in all the large cities of South America, are very prevalent among all classes of society. I would like to see the profession of Valparaiso and of all Chile take more interest in medical societies and the current medical literature, and by so doing become more frequent contributors to the general fund of medical knowledge, the sum total of the careful clinical observations, original research and laboratory work created and maintained by scientific physicians in all parts of the world. South America has had and has now a large number of scientific progressive men, but their work, unfortunately, only too often has failed in reaching the rapidly flowing current of medical literature. Let us, north of the equator, do all we can to secure the interest and cooperation of the great mass of the medical profession on the opposite side of the equatorial line in everything that pertains to the progress of medicine and to the welfare of suffering humanity.

DEAD AND INJURED OF THE VALPARAISO EARTHQUAKE.

In a little book written by Dr. José Grossé, surgeon general of the Chilean army, entitled "Servicio Medico de un Terremento," which he kindly gave me, I found many facts and figures bearing on the loss of life and the numbers of injured in the Valparaiso earthquake.

The exact number of deaths could not be ascertained, as many of the corpses remain hidden under the débris of large collapsed buildings, especially under the ruins of one of the largest churches. Fortunately, there was no one in the ruined Victoria Theater.

Some estimate the number of dead as high as 7,000, but Dr. Grossé gives the figure as 1.33 per cent. of the population, estimating the latter at 150,000. This would make the number of dead 2,000. He compares this estimate with the statistics of the San Francisco earthquake in which the mortality was 452, or 0.12 per cent. of the population of that city, figuring the latter at 350,000.

The number of those wounded or made ill by the immediate or remote effects of the earthquake exceeded 10,000. There were 776 patients suffering from wounds of the head; 44 from wounds of the neck; 201 from wounds of the arm; 634 from wounds of the hand; 124 from wounds of the shoulder; 96 from wounds of the trunk; 402 from wounds of the leg, and 207 from wounds of the foot. The cases of fracture involved the following bones: Cranium, 142; bones of the hand, 18; shoulder, 10; trunk, 50; leg, 35, and foot, 14. The luxations involved the arm 4 times, the head, 7 times; the shoulder, 12 times; the leg, 3 times; and the foot, 12 times. Among the injuries was a large proportion of contusions, divided as follows: Head, 322; neck, 31; arm, 59; hand, 9; shoulder, 1; trunk, 138; leg, 96, and foot, 75. Only 27 amputations and one resection were made, which speaks well for the conservative treatment of the wounded.

Prompt action on the part of the authorities, who placed Dr. Grossé in charge of the wounded and sick, was the means of preventing much suffering and of saving many lives and limbs. A temporary hospital was erected, and this, with the existing hospitals, provided ample hospital space, while 11 dressing and first-aid stations, located where they were most needed, furnished prompt treatment for those who required care outside of the hospitals.

A large corps of military surgeons, civilian practitioners and medical students from Santiago volunteered their gratuitous services and did excellent work under the direction of Dr. Grossé. The Alcalde of Valparaiso, at the termination of Dr. Grossé's services, presented him with a flattering testimonial for his successful management of the trust imposed on him, and I am sure that all the sufferers from the earthquake and every citizen of Valparaiso would most heartily endorse the document.

The whole number of patients who received medical aid was 11,277. Of these, 4,836 were surgical and 6,441 medical cases; 751 received hospital treatment and 10,526 were cared for at dressing and first-aid stations, at dispensaries or at their homes.

Two physicians and four medical students had in charge the hygiene and sanitary part of the relief work, which consisted in disposal of the human and animal cadavers, and the disinfection of localities where decomposing human or animal bodies were lying or buried under the débris of collapsed buildings.

The most prevalent diseases which followed in the wake of the earthquake were bronchitis, pneumonia, rheumatism, influenza, dysentery and typhoid fever.

As has been the case in all great disasters the world over, the medical men of the city acted promptly and in harmony in giving aid to the victims of the earthquake, and gave another brilliant example of the nobility and humanitarian character of the medical profession.

VALPARAISO, CHILE, Aug. 16, 1907.

Clinical Notes

FOREIGN BODY IN LARYNX FOR TWO AND ONE-HALF YEARS.

STANTON A. FRIEDBERG, M.D.

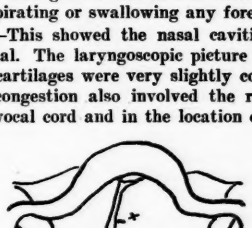
Attending Physician, Ear, Nose and Throat Department, Cook County Hospital.

CHICAGO.

The case herein reported is that of a girl who was admitted to my service at the Cook County Hospital in July, 1907. The history obtainable was not satisfactory, only a few facts being ascertained as follows.

History.—Female, aged 12, Polish, had diphtheria five years previously. Following this there was some difficulty in swallowing for two months. There was no hoarseness at this time nor was there any history of other post-diphtheritic paralysis. On admission to the hospital the main complaint was of hoarseness. This had begun in the winter two and a half years previously and had been of gradual onset. At the time of examination she was able to speak only in a rough whisper, and even this required considerable effort on her part. During the winter she had occasionally had some pain which was referred to the larynx. There was no dyspnea, no difficulty in swallowing and no pain. Her general health was excellent. There was no history of aspirating or swallowing any foreign substance.

Examination.—This showed the nasal cavities and pharynx practically normal. The laryngoscopic picture was as follows: Both arytenoid cartilages were very slightly congested but not swollen. This congestion also involved the right vocal cord. Above the left vocal cord and in the location of the false cord



Appearance of larynx with eyelet (x) in place.

there was a large tumor-like mass which covered the cord for about three-fourths of its extent, the posterior fourth being visible. This was seen to be slightly congested. This mass extended across the median line (see illustration) and partly covered the right cord. Anteriorly it extended up to the epiglottis where, on the left side, the base seemed to be infiltrated. On phonation it touched the right lateral wall of the larynx above the cord. The swelling was smooth and apparently covered with mucous membrane. No ulceration was present. About the middle of the free border of the mass appeared a small black object having the appearance of a small piece of wire. This was approximately 2 mm. in length and .5 mm. in width and did not project beyond the border or surface of the swelling. It was placed transversely to the antero-posterior axis of the growth. A diagnosis of foreign body was made. A skiagraph was taken which showed the foreign body to be an eyelet in an obliquely upright position.

Treatment.—Under local anesthesia consisting of a 10 per cent. solution of cocain applied to the larynx with a swab an attempt was made to remove the body with forceps. Although a number of different style forceps were used the result was a failure. This was due to several factors: The visible part of the eyelet did not project beyond the surface of the mass, so that it was impossible to grasp it; the border of the swelling was freely movable; the patient was unable to refrain from coughing when the attempt was made to seize the body. Direct laryngoscopy was determined on and under chloroform anesthesia several days later an attempt was again made. No especial difficulty was encountered in entering the larynx with the tube. After a most diligent search, however, the foreign body was not to be found. The tube used was perhaps a trifle large, and even in a normal larynx of a child that age could not have been forced below the vocal cords. What happened in this case was that the projecting edge of the swelling was forced downward as the tube entered. The arytenoid cartilages and a small part of the cords posteriorly could be seen. Otherwise the result of the examination was negative. No inconvenience was suffered from the examination. Having made two failures in attempting to remove the foreign body through the natural way, the question arose, How could the eyelet be removed? Laryngotomy was considered to be the last resort. In spite of the failure of the indirect method another trial was determined on. Three days following the use of the tube the larynx was again anesthetized. An attempt to grasp the body with forceps again showed the futility of this method. A Cordes cutting forceps was introduced and placed in position with the edge of the mass between the blades. The blades were closed, cutting the tissue on either side, and a strong upward pull was made which served to loosen the eyelet. The forceps were again introduced and the eyelet was easily removed. Some of the tumor-mass was also removed and appeared to be simply granulation tissue.

Subsequent History.—The subsequent course of the patient has been favorable. There has been a gradual disappearance of the granulation tissue, although there is still some present. The left cord is visible throughout its entire extent even on phonation. The voice has constantly improved; it still possesses, however, a slight element of hoarseness. No effort is required in articulation and progress during the past four months has been satisfactory.

The literature on the subject of foreign bodies in the larynx is quite voluminous, embracing an infinity of objects which have remained in the larynx from a few hours to a number of years. An attempt to give even a digest of what has been written would take up too much space. The case just reported is of interest because:

1. Of the long duration of the presence of the eyelet.
2. Of its location above the cord in a mass of granulation tissue which included the false cord. When the eyelet entered the larynx it is probable that during the coughing which followed it became wedged with one shank resting above the false cord, the other below it with one of its curved ends lodged in the ventricle.
3. Of the absence of symptoms except that of hoarseness.
4. Of the difficulties encountered in its removal. These, however, turned out to be more apparent than real.
5. Of the value of the skiagraph in showing exactly the nature and position of the foreign body.

34 Washington Street.

Atypical Forms of Yellow Fever.—J. A. L. del Valle publishes in the *Revista de Med. y Cir.*, March 10, a study of a number of cases of yellow fever presenting unusual features. He affirms that yellow fever as a disease entity has no pathognomonic symptoms, and that every non-immune with fever and general depression, in a yellow fever country, should be regarded as suspicious of yellow fever. During the terminal period of an epidemic of yellow fever every possibly receptive person presenting symptoms should be regarded as probably having yellow fever, no matter how atypical the clinical picture. In one of the atypical cases reported all the usual symptoms were present and very severe except that the temperature never rose above normal. In other cases the symptoms were so slight that the patients continued their usual occupations undisturbed until into convalescence, when the prostration became extreme. The urine should be examined at once, del Valle urges, in every case of illness in a yellow fever country, regardless of the symptoms presented. Finlay stated in a previous number that the proportion of ambulant cases of yellow fever had been exceptionally large during the last epidemics in Cuba.

COMBINED TROCAR AND DIRECTOR.

EDMUND F. WOODS, M.D.
JANESVILLE, WIS.

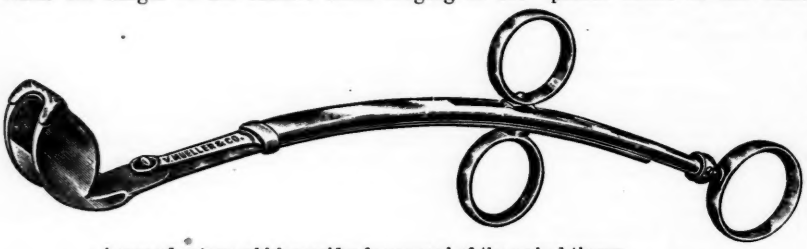
The instrument shown in the accompanying illustration is a combination of trocar and director and can be attached to any aspirator. It is triangular in shape, with a deep groove along one surface. It has a keen cutting point, and is easier to introduce than the usual round instrument. I find it very useful in deep-seated

abscesses, where, after locating pus, the trocar is removed, leaving the grooved director in place to follow in with the knife. In such cases, after pus is located, there is no difficulty in cutting down to open and drain, as there sometimes is when the trocar must be removed before the incision is made. I have had these instruments made in two sizes, one four inches long, the other five.

A NEW ADENOTOME.

BURT D. LAFORCE, M.D.
OTTUMWA, IOWA.

This instrument is so made that when the adenoid is cut off it is removed with the instrument. This obviates the danger of the excised tissue lodging in the larynx, being swallowed or being pushed into the nares. The adenotome is made in three sizes and in such a way that there is no danger of its being broken while in use. The accompanying illustration renders further description unnecessary.



A new adenotome which provides for removal of the excised tissues.

DIPHTHERIA ANTITOXIN IN BRONCHIAL ASTHMA.

HERBERT F. GILLETTE, M.D.
CUBA, N. Y.

In THE JOURNAL, March 23, 1907, is a letter from Dr. Fitzmiller, of Piqua, Ohio, calling attention to the benefits accruing from the use of antitoxin in asthma. For some two years I have been bothered considerably by attacks of asthma, due to the dust or odor of a horse, not having it at night unless I drove during the day previous. On Oct. 19, 1907, I received 2,000 units of diphtheria antitoxin, and on Nov. 3, 1907, I was given 3,000 units. Only a slight reaction followed the injection, but I have had complete relief since the last dose.

On November 8, Mr. B. called on me at 8 p. m., and asked me to administer the treatment to him. Two weeks previously I had examined him for life insurance. He was rejected because of his history of asthma. He was 52 years old; weight 155 pounds, chest 35 to 37½ inches, an expansion of 2½ inches, so that the question of emphysema was not considered; height six feet. Family history negative, except that one brother died suddenly. He had asthma and bronchial catarrh. Urine normal; heart normal. He gave a history of a rheumatic attack 15 years previously. He coughed and raised plenty of sputa.

I procured 2,000 units of antitoxin globulin, from the same lot from which my first injection was taken, and administered it to him under the left scapula. While he was dressing, he said he felt a prickling in the chest, and in the back of his neck. He asked me whether I had had the same sensation, and sat down in a chair. At once he said he could not breathe. I felt his pulse and found it regular and full. I told him that probably he was faint, and put about 20 drops of adrenalin chlorid on his tongue, and placed him on his back on the floor. He was seized with a tonic spasm and died at once, not living five minutes after the injection. He was slightly cyanosed. As soon as I placed him on the floor, I telephoned for help and Drs T. S. Thomas and W. O. Congdon responded at once, but he was dead when they arrived, two minutes after being called.

The case was turned over to the coroner, with a request that the matter be investigated fully. An autopsy was held, and all the important structures were examined. The following is from the report:

The lungs appeared somewhat larger than normal, were much pigmented, especially the left apex, and filled with venous blood, but no tubercular lesions or cavities were found. The heart was empty, the valves normal; weight of heart, 12 ounces; pericardium adherent to heart, which was supposed to be due to pericarditis from rheumatic attack, which the patient stated he had suffered with some years previous. Liver normal in appearance; weight, 4 pounds. Kidneys abnormal, softer and more moist than usual; right kidney weighed 8 ounces; left kidney weighed 2 ounces, but did not seem to be cirrhotic. Spleen engorged with venous blood, looks darker than usual, and seemed to be somewhat granular.

It is not thought that any impurity of the antitoxin was present to account for the death, and it has been suggested that death was due to some obscure action of the antitoxin on the nervous system of the man. It is possible that time may prove that some precaution is to be used in administering the remedy to an asthmatic, but what that precaution may be, time only will determine. One pathologist has suggested that the condition known as the status lymphaticus was present, and many things point to its presence in the case.

Since the death of Mr. B. I have had reports of two cases where death took place, as in the case reported, following the use of antitoxin for the relief of asthma.

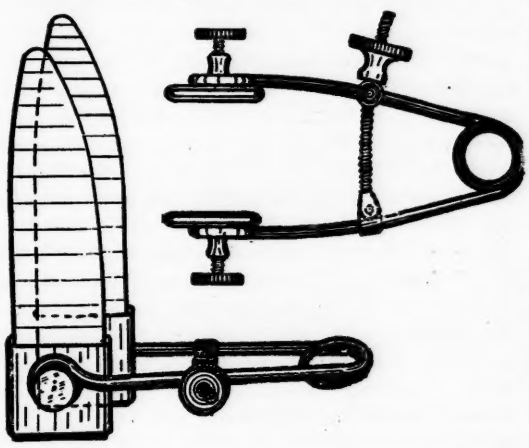
Impetigo Contagiosa.—Beers; in *Merck's Archives*, states that impetigo is not communicable. It commences as pustules; the lesions are deep, and the pustules are elevated and rounded. The general health is good. Treatment, he declares, is simple. A grain of calomel, in broken doses, is given, followed by a saline. Some constitutional tonic is then given to increase the general resistance powers of the individual. Externally, the treatment consists in softening the crusts with olive oil and then removing them with warm water and soap. As soon as this is accomplished, application of an ointment consisting of 10 grains of ammoniated mercury to the ounce is all that is necessary to complete the cure.

SUBMUCOUS BLADE SPECULUM.

FREDERICK E. NERES, M.D.
AND
DANIEL S. NEUMAN, M.D.
DENVER.

This speculum is designed to simplify, shorten and to facilitate generally submucous septal resection operations. A complete set consists of three pairs of blades of different sizes and one holder. One pair of blades is selected to suit the conditions of each individual case and fasten into the holder.

After incision and separation of the mucous membrane and perichondrium on each side of a deflected septum the speculum is inserted into the nasal chamber on the side of the incision, thence pushed forward into the incision, one blade of the speculum passing on one side of the cartilage and the other blade on the other side, thus "clothes-pinning" the cartilage and bone. By this procedure the blades act as guards on both sides and absolutely prevent button-holing the mucous membrane and perichondrium. The spring setscrew above the blades is then released in order to hold the mucous membrane apart; when thus spread as wide



Submucous speculum, showing largest size blades in position.

as convenient the septal cartilage and bone is plainly exposed between the blades and ready for removal without injury to the mucous membrane on either side and by this means the operation is materially shortened.

The instrument is so designed as to have a spiral loop spring and two parallel shanks which are adjustable by means of a fast-running bar-screw connection. To the two parallel shanks are attached two slit sockets supplied at the side with setscrew connections; into these sockets the blades of the same size or different sizes may be placed and securely fastened by a setscrew on each side. The three pair of blades are all of the same length and thickness, 6 cm. (2⅜ in.) by 1 mm. (1/25 in.), but the width varies, the largest being 15 mm. (⅝ in.), the medium 12 mm. (½ in.) and the smallest 9 mm. (⅜ in.) wide. The two smaller sets of blades may be secured in the slit socket at any angle away from the horizontal to 45 degrees; any one blade or both can be shortened independently or placed at different angles. All the blades being of the same thickness, many opportunities are present for different adjustments in either the length or width of each blade.

The advantages claimed for this instrument are:

1. It materially shortens the time of operation.
2. It protects the mucous membrane.
3. It is small in size and light in weight.
4. It has interchangeable blades that are adjustable to different angles.

IMPROVED METHOD OF SECURING END OF SUTURE IN APPROXIMATING EDGES OF SKIN WOUNDS.

JOHN E. CANNADAY, M.D.
MOUNDSVILLE, W. VA.

During several years of active surgical work I have tried the various methods of wound closure in vogue, and it has seemed to me that all had many shortcomings. Consequently I have from time to time taken up first one method, then another, only to abandon them.

Sutures that penetrate all the layers of the skin are not infrequently followed by stitch abscesses. The penetration of the always infected superficial layers of the skin and the slight necrosis caused by varying degrees of tension together helping to bring about this. The interrupted tension sutures of silkworm gut, including muscle fascia, subcutaneous fat and skin, are usually tied tightly and often cause some infection. Catgut being a good culture medium when used as a suture through the skin, stitch infection often follows.

The subcutaneous skin suture has rightly grown more popular. When catgut is used in this manner there may be a little infection at each end of the suture line where the knot of beginning or ending is tied. When silk or

silkworm gut is used no germ feeder is introduced into the wound, but when a hard knot has been tied at each end, removal of the suture is difficult for the doctor and painful for the patient. If each end has been tied around a roll of gauze the latter makes an undue amount of pressure on the ends of the wound, retains wound exudates which may decompose and threaten the patient with infection before the proper time for the removal of the sutures has arrived. When lead plates, buttons or shots are used at the ends the old objections of pressure arise, and, besides, such devices are a little complicated and are not always at hand.

For the subcutaneous skin suture I use a fair size of Pagenstecher's celluloid linen thread; this is non-absorbent, easily sterilized and very strong. It does not cling to the fingers like wet silk, is easily handled and, aside from its permanency in the tissues, is almost an ideal suture material.

In the beginning, after catching each side of the skin incision, I tie only a half bowknot (see cut) which holds securely, as the roughened surface of this linen suture does away with the tendency to slip. The end of the suture is left rather long. After closing the wound in the usual manner, being careful to avoid entering the most superficial layers of the skin with the needle, the suture is tied in the same way as at the beginning. When the time for removal of the suture comes the free end of the beginning bowknot is pulled on easily, untying the knot, the end is clipped close to the skin and slight traction on the knot at the other end of the suture easily removes the whole line of thread. The clinical results of this method have been excellent.

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[For other information see second page following reading matter.]

SATURDAY, JANUARY 4, 1908.

DEATHS OF PHYSICIANS IN 1907.

During 1907 the deaths of 2,013 physicians in the United States and Canada were noted in THE JOURNAL, equivalent to an annual death rate per 1,000 of 16.1, based on an estimate of 125,000 practitioners. This death rate does not differ materially from those of the previous five years, which were, respectively, 1906, 17.2; 1905, 16.36; 1904, 17.14; 1903, 13.73, and 1902, 14.74. The age at death varied from 21 to 97 years, the average being 58 years, 11 months and 18 days. The number of years of practice of the decedents varied from the first year of practice to the seventieth, with an average of 30 years, 4 months and 21 days. About 11 per cent. of those who died were members of the American Medical Association. Chief among the causes of deaths were heart disease, cerebral hemorrhage, pneumonia and violence, in the above order.

Causes of Death.[1]—During 1907, 190 deaths were attributed to general infectious, malignant and nutritional diseases and tuberculosis; 225 to diseases of the nervous system; 107 to diseases of the digestive system; 243 to diseases of the circulatory system; 181 to diseases of the respiratory system; 140 to diseases of the genitourinary system; 83 to miscellaneous diseases, and 141 to violence. Chief among the assigned causes of death were heart diseases, 234; cerebral hemorrhage, 184; pneumonia, 147; nephritis, 120; tuberculosis, 66; senile debility, 50; malignant disease, 42; typhoid fever, 32; appendicitis, 31; septicemia, 20; diabetes, 18; gastritis, 13, and influenza, 11. Two deaths each are reported from diphtheria, scarlet fever and tetanus.

The deaths from violence during the year numbered 141; of these 87 were due to accident, 37 to suicide. 16 to homicide, and one physician expiated the crime of murder in the electric chair. Falls, and steam and street railways accidents each were responsible for 25 deaths, poison for 12, drowning for 5, gunshot wounds and runaways for 3 each, and burns, suffocation and automobile accidents for 2 each. The 37 physicians who are reported to have killed themselves chose the following methods: Gunshot wounds, 13; poison, 9, 4 of which were from morphin, 2 each from carbolic acid and potassium cyanid and 1 from strychnin; 5 cut their throats; 3 hung themselves; stab wounds, drowning and jumping from heights each caused 2 deaths, and 1 was due to asphyxiation.[2]

Ages.—Of the decedents 85 were between the ages of 21 and 30, 253 between 31 and 40, 247 between 41 and 50, 344 between 51 and 60, 404 between 61 and 70, 331 between 71 and 80, 172 between 81 and 90, and 12 more than 90 years of age. The greatest numbers of deaths occurred at the ages of 67 and 62, when 54 and 51 deaths respectively were reported.

Years of Practice.—One practitioner had been in practice for 70 years, 50 for from 60 to 70 years, 267 for from 50 to 60 years, 558 for from 40 to 50 years, 961 for from 30 to 40 years, 1,381 for from 20 to 30 years, and 1,714 from 10 to 20 years.

Military Service.—The Civil War veterans who died during 1907 numbered 332, of whom 231 followed the federal fortunes and 101 the lost cause, 11 saw service in the Spanish-American War, 5 in the Mexican War, and 17 served in foreign wars. The medical department of the Army lost 24 by death during the year, the Navy lost 14, and the Public Health and Marine-Hospital Service, 8. Twenty-eight were surgeons in the National Guard, of whom 8 had attained the rank of surgeon general.

Medical Positions.—Medical colleges suffered a loss of 112 professors, lecturers, instructors or demonstrators; 231 members of hospital staffs died; 130 health officers or county or city physicians; 80 members of boards of education; 31 members of state boards of health or medical examination and registration; 21 editors of medical or lay journals, and 59 railway surgeons.

Among the more prominent dead of the year may be mentioned the following:

Robert Harvey Reed, Rock Springs, surgeon general of Wyoming, eminent as an editor and railway surgeon.

Sir William Hales Hingston, Montreal, dean of the medical profession of Canada.

Oronhyatekha, Toronto, a most notable Indian, fraternalist and temperance advocate.

John Hall Brinton, Philadelphia, surgeon and teacher.

William Baldwin Fletcher, Indianapolis, alienist.

Robert Augustine Marmion, Washington, medical director U. S. Navy, retired.

Felix Formento, New Orleans, authority on hygiene and sanitation.

William Thomson, Philadelphia, ophthalmologist and microphotographer.

1. It is difficult in many cases to verify the causes of death because of paucity of detail and the fact that the reports often are from lay sources, so that a large proportion of deaths are stated as having been due to "heart failure," "kidney disease," "paralysis," etc. The increased facilities for obtaining detailed information, however, are evidenced by the fact that the percentages in which age, duration of practice and cause of death could not be ascertained are less than in previous years. The age was not noted in 9.20 per cent. of the cases, the duration of practice could not be ascertained in 2.29 per cent., and no cause of death was assigned in 34.92 per cent.

2. In this connection it may be of interest to refer to the report on page 67, this issue, of a "Symposium on Diseases of Physicians" at the Philadelphia County Medical Society, December 11.

Donald Macrae, Council Bluffs, leading surgeon of Iowa.

James Carroll, major and surgeon U. S. Army, expert on yellow fever, the first to contract the disease deliberately to test the truth of the mosquito theory.

Patrick Livingston Murphy, Morgantown, N. C., alienist and insane hospital superintendent.

George Frederick Shrady, editor of the *New York Medical Record.*

THE TREATMENT AND PREVENTION OF SCARLET FEVER BY INJECTIONS OF DEAD STREPTOCOCCI.

Impressed with the idea that streptococci, if not the actual cause of scarlet fever, at least play a most significant rôle in its course, Gabritschewsky[1] introduced the use of injections of dead streptococci for curative as well as preventive purposes in this disease. Before using this method on human beings he studied the preparation and action of streptococcal vaccine, so-called, on horses suffering from strangles. a disease caused by streptococci. Encouraged by the favorable results thus obtained, he proceeded to inject dead streptococci into human beings suffering from or exposed to scarlet fever. He used concentrated broth cultures of streptococci obtained from cases of scarlet fever and killed by heating to 60° C. and then mixed with 0.5 per cent. phenol. In each c.c. there were from 0.02 to 0.03 c.c. of bacterial substances, and 0.5 c.c. was the ordinary dose for children from two to ten years of age. If no undue reaction occurred, from one and one-half to two times this dose would be given again in the course of the next seven or ten days. From observations on more than 700 children thus treated he concluded that this method has a distinct preventive action, recommending it for use on a larger scale in actual practice. Following the first injection there may appear an eruption which resembles more or less the scarlatinal, but which is not associated with scaling. In a few cases angina also occurred and more rarely vomiting; these symptoms were interpreted in favor of the view that streptococci are the actual cause of scarlet fever, but it is evident that the angina may have developed quite independently of the injections. More recently Gabritschewsky[2] emphasizes again the fact that streptococci and streptococcal vaccines may cause scarlatiniform eruptions, which fact he holds to be strong evidence in favor of the streptococcus being the specific cause of scarlet fever.

Reverting now to the use of dead streptococci in the prevention of scarlet fever, we find that extensive series of cases thus treated are being reported from Russia.[3] In fact all the work so far published on this form of treatment of scarlet fever seems to have been done in Russia. Both Nidrigailow and Zlatogoroff express the hope that even if streptococci may not be the actual cause of scarlet fever but the cause rather of the complications which render the disease so feared, the use of the vaccine may be found of great value. Perwoff injected 283 children in 149 families and found that in those families in which the injections were made scarlet fever did not appear. In three families, in each of which a single case of scarlet fever was present, all children were injected with the exception of one, and all those injected remained well, whereas the uninjected child became ill after from two to three weeks. Schamarin used the injection in 185 cases, and of these two patients died, not having been injected until after the development of the disease. Of the other children none became sick, although twenty had come into direct contact with scarlet fever patients. His dose is as many decigrams of the vaccine of Gabritschewsky as the patient is old in years.

The largest series of cases comes from Nikitin, who has employed the vaccine in 767 cases; of these 149 patients were injected three times, 106 twice and 528 once. He employed the dose given by Gabritschewsky. The local reaction consisted usually in some swelling and redness of the skin around the puncture with a little tenderness, the temperature rising from 1 to 1.5° C. In rare cases the reactive phenomena were more pronounced, there being redness about the lymphatic vessels, swelling of the adjacent lymph nodes, even eruption over the whole body, rise of temperature as much as 3° C. and other general symptoms. After the second injection the reaction was always milder, and after the third hardly noticeable. Children who previously had passed through an attack of scarlet fever (nine cases) gave no reaction whatsoever. Children both of whose parents had had scarlet fever gave a mild reaction. Of the 767 persons injected only eight acquired scarlet fever, and all of these eight had received only one inoculation, while of those who received two or three injections not a single one became sick, although the majority of them lived in regions where scarlet fever was prevalent in rather severe degree, the mortality being 20 per cent. In four villages in which no vaccination was employed the percentage of sick was 16, whereas of the injected children the percentage of sick was only 1.4. The most important contraindications to the use of dead streptococci are existing fever and renal disease. Nikitin believes himself justified in concluding that injections of dead streptococci diminish the number of cases of scarlet fever and may be an effective method of bringing epidemics to a close.

We have given this summary of the Russian publications without comment. It is manifestly premature to embark on theoretical speculations in regard to the cause of scarlet fever on the basis of this work. It is, however, an accepted fact that streptococci are intimately associated with scarlet fever from the very first and it would not be altogether surprising if the injec-

1. Centribl. f. Bakt., 1906, xli, p. 719.
2. Berl. klin. Wochschr., 1907, No. 18.
3. Zlatogoroff: Centrbl. f. Bakt., 1906, xlii; Nidrigailow, ibid; Langoway, ibid; Perwoff, Schamarin. Nikitin, Russky Wratch., 1907.

tion of suitable quantities of dead streptococci were found to have some influence on the disease. We hope that the work commenced in Russia will be taken up soon in other countries also, so that the actual possibilities of the method may be clearly determined.

THE PROFESSION OF TEACHING

Looking back after forty-seven years' connection with the University of Edinburgh, as student and teacher, the reminiscences of Mr. John Chiene, C.B., professor of surgery at that institution,[1] form a charming picture of a life devoted to the teaching of surgery. "Forty years ago," he says, "in the end of February, 1867, my dear master, John Goodsir, sent for me, his junior demonstrator of anatomy, to his house at Wardie, off the Granton Road. I found him lying on a camp bed in a narrow room, a small table at his side, and on the table his Bible and Quain's 'Anatomy.' He asked me how his students were getting on and bade me farewell. His last words were, 'Teach my students, Dr. Chiene. Good-bye.' He died shortly afterward, on the 6th of March, and I have taken these words as my life motto."

That tells the whole story. Mr. Chiene made teaching his work, his university and his students his first consideration. The practice followed. The modern tendency toward teaching for the sake of practice, and the fact that men are less and less making teaching their profession, are deplored by him. Fortunate is the university that has servants of such convictions. And yet under present conditions our younger men must rely, at least in part, on their private practice, for in clinical work the junior grades in our teaching institutions offer salaries which are quite inadequate. Nevertheless, it is possible to aim from the start toward a career of teaching, and it is the men who have held the subordinate positions, who have come in intimate contact with students for years, who make by far the best teachers. Great clinicians, operators or investigators are not necessarily the best teachers, though there is no reason why a great teacher should not be any one of the other three.

Each of us will probably recall examples of the two types of successful teacher—the one who saves us considerable exertion by forcing into our memories, whether we will or no, many important facts, the other who leads us on to the sure ground of reason, of independence. The first dogmatizes unconscionably, and he is a great comfort in the confusion of our early struggles. Both must have a fine sense of proportion and of medical students, and in the best we see a loyalty to their own institution without intolerance of others, and an enthusiasm for their work, which is the spirit that makes a true university atmosphere. Our country has produced many such, and the opportunity was never better for those who have the desire and the aptitude for medical teaching.

1. Edinburgh Med. Jour., November, 1907.

GRIP, HEART DISEASE, AND THE PACE THAT KILLS.

During the year just ended heart disease is reported to have caused many more deaths than in 1906—in Chicago and Boston 13 per cent. more, in New York City 29, in Detroit 26, in Philadelphia, 5, etc. Two factors are held responsible: the wear and tear of life in the present day and the prevalence of grip.

Such is the stress and strain of modern life that patients who are men of affairs can not be made to take the prolonged rest which is imperative during convalescence from grip. Nay, even from the beginning of that serious disease, will they persist in leaving their homes as usual after breakfast, when they most decidedly should be in bed. There is this difficulty even with elderly men. One of these recently disobeyed his physician. "Such a fussy lot are those doctors; besides, an old horse that lies down never gets up," he declared, putting on his overcoat and going to business. That afternoon he returned in collapse and died next day.

The fault is not with the medical profession, in whose power it unfortunately does not lie to command changes—however wise they may seem—in the manners and customs of the age. Their warnings against fast living, undue indulgence in food and intoxicants and against business habits which induce such nerve tension as must inevitably wreck the organism when it is visited by disease, may go on unheeded. But physicians are in duty bound to explain to every patient ill with grip the weakening effect on the heart muscle which the disease may have. To this is due the great weakness, listlessness and depression characteristic of grip. Sometimes death comes suddenly on comparatively slight exertion or excitement, the immediately causative lesion being a dilated heart. Toxic action on the myocardium, a heightened blood pressure, especially as affecting the right cavities, paralysis of the cardiac plexus—such are the things to be feared in grip; and very much so when the arteries are hard and the kidneys inefficient. When the temperature changes have been marked and prolonged, when there is a weak, rapid, intermittent pulse, dyspnea, cyanosis of lips and finger tips, a gray or dusky skin, epigastric pulsation, pain about the heart, right cardiac dulness and distension of the cervical veins, grave prognosis must be forthcoming.

THE NOBEL PRIZE IN MEDICINE.

The Nobel prize for the present year "for the greatest benefaction to mankind by a discovery in medicine in recent years" was conferred on Alphonse Laveran, the discoverer of the germ of malaria. There are features of Laveran's career which make the story of his discovery worth while telling, for it represents in type about how scientific discoveries are made and received. After graduation in medicine in 1867, Laveran joined the French Army Military Corps, and in 1874, when

he was just entering his thirtieth year, he received an appointment as instructor at the Military Hospital of Val-de-Grace in Paris. His teaching proved the best possible rounding up of his scientific education and probably made him realize the limitations of his knowledge. His experience in France had not brought him in contact with malaria, so that, when he went to Algiers, four years later, his mind was free from preconceived notions regarding its cause. Within a year he suspected the cause, within two years he had found it.

The Italians did not accept Laveran's discoveries nor did the medical world in general. A bacillus of malaria had been described by Tommasi-Crudeli and this was generally accepted by Italians as the cause. Even when Laveran made a visit to Italy in order to confirm his Algiers observations and demonstrated there the parasite that he had discovered, it was not accepted. Marchiafava and Celli not only continued to write on malaria and its causation by a bacillus, but when, in 1884, Laveran published his epochal "Treatise on the Malarial Fevers," these Italian observers made their criticism of his position by publishing a paper bearing the title, "The Changes Which Occur in Red Blood Cells as a Consequence of Malaria and the Genesis of Malarial Melanemia." They insisted that there could be no possible doubt that Laveran had been mistaken and had taken certain effects of malaria on the red blood cells for the cause of malaria. It was the old objection to the significance of bacteria and of microbes generally once more revived. When the bacillus of anthrax was discovered, these minute particles which took the stains so deeply were said to be degenerated products, the effects of disease, and not at all the causes of disease. The Italian observers declared that during malaria there was a necrobiosis of the red blood cells as a consequence of which the hemoglobin was changed into melanin, and that of many living red blood cells there remained after the paroxysm only the circulating corpses, in which were the appearances described by Laveran.

Fortunately, however, other observers soon came to confirm Laveran's work. Another French observer, Richard, whose name in connection with malaria is not nearly so well known as it should be, not only confirmed Laveran's discovery, but succeeded in demonstrating that the malarial parasites, which Laveran thought to be outside of the red blood cells, clinging to them, really had their habitat inside these cells. This is probably the most important observation made with regard to malaria after Laveran's own, except, of course, that of the mosquito carrying of the disease. Laveran himself succeeded in demonstrating that just the same form of parasite was to be found in patients suffering from Roman fever as he had discovered in the malaria of Algiers. Within a year after their declaration of the nullity of Laveran's discovery, Italian observers changed their opinion, began to adopt Laveran's way of thinking, and in 1885 initiated a series of brilliant observations, which have greatly contributed to our knowledge of the life history of the malarial parasites. We are, indeed, under deep obligations to the Italian school of medicine in this subject, and if they had only not suggested the unfortunate term plasmodium we would feel still more deeply grateful to them. It has been said that the term plasmodium is perhaps one of the most inappropriate of all the names suggested for the malarial parasite, and yet, in spite of this, having once gained a foothold, it seems likely to maintain itself, as have so many other unsuitable designations in medicine. A plasmodium in scientific language is an irregular mass of protoplasm which undergoes very simple division and contains many nuclei, while the malarial organism has but a single nucleus and passes through a complicated life cycle. Metchnikoff suggested the name *Hemophillum malariæ,* a much better term, but it has never had any vogue.

The significance of Laveran's discovery can scarcely be exaggerated, and the Nobel Committee made no mistake in awarding him this year's prize in medicine.

THE DOMINANT IDEA AS A FACTOR IN PUBLIC HEALTH.

In an article in the *Boston Medical and Surgical Journal,*[1] entitled "A Study of Fifty-one Cases of Debility in Jewish Patients," Mr. H. Morrison calls attention to two remarkable illustrations of what one may call the result of diffused suggestion by world thought. We are accustomed to think of the influence of suggestion only as affecting the individual in an acute stage, so to speak; that is, as the result of some direct exciting cause, acting on him either alone or in company with many others subject at the same time to the influence of the same suggestion ("crowd suggestion"). But there is a far more subtle form of suggestion, which undoubtedly affects the physical and psychical conditions of whole groups of people, that of a common traditional belief. Mr. Morrison's instances referred to are given in his report of an investigation into the environments of a number of Jewish patients from the Massachusetts General Hospital, who were suffering from what, from its frequent occurrence, is known at that institution as "Hebraic debility." First, he points out that "the undercurrent of thought on this subject seems to be that from time immemorial women have been sick; it is a sort of privilege tolerated with them; it is even expected of them." The second observation is: "One often hears of the percentage of people seeking medical advice at hospitals, but one seldom considers that many people seek medical advice because there are hospitals." In Russia, as Mr. Morrison points out, hospitals are rare; so that in her old home the Russian Jewess learns by force of circumstances to disregard many minor ailments, undoubtedly existing, till they become relegated to the subconsciousness, in the

1. Issue of Dec. 19, 1907. Abstracted in this issue, page 72.

presence of "the daily round, the common task;" much as one immersed in study or any engrossing occupation may become oblivious of the demands of hunger. But as the sight or the odor of food will drag forth the hunger into consciousness, so does the presence of means of relief within her reach restore the woman's ailments to a dominant position in her conscious life. There seems to be little doubt as to the potency of the "dominant idea," not only on the individual, in which respect we are usually ready enough to recognize its influence, but on whole communities and races as a result of traditional belief passively accepted.

CANCER RESEARCH.

The advances made during the past decade in the field of experimental research into the causes of cancer have been so marked and so far reaching that those prosecuting this work have felt for some time that the time had arrived for the formation of an American association for cancer research. Americans now occupy an enviable position in the front rank of cancer research; in fact, the first laboratory exclusively devoted to cancer research is American, and the suggestion for the recent successful international congress held in Heidelberg, was made by an American. The American Society of Cancer Research, a report[1] of whose first meeting, held recently, we publish this week, is the direct outcome of the efforts of American cancer research workers to found such a society. The membership of the society is composed largely of laboratory investigators, but it is the intention of the founders to broaden and expand the scope of the society. Special research work on cancer has been done at a number of places for several years. The State of New York maintains an institute at Buffalo; special workers are investigating this subject at Harvard and Cornell, and individual work is being done at the University of Pennsylvania, the Rockefeller Institute, the St. Louis Skin and Cancer Hospital, and at other similar institutions. It may reasonably be expected that much benefit will be derived from the cooperation which is bound to follow from the correlation of all this work through the agency of this society.

WANTED: AN EPICENE PERSONAL PRONOUN.

The difficulties arising from the lack in English of a personal pronoun common to both genders are suggested by the following paragraph from a work on the practice of medicine by one of our prominent writers, a professor in an old established Philadelphia medical college. Speaking of obesity, he says: "As a rule, the patient is not content with the plan of treatment which does not actually diminish the fat, partly because *he* has delayed consulting a physician until the condition is far beyond what *she* desires" (italics ours). We are not sure, however, that the "she" does not refer to the patient's better half, since we have recently learned that some women are acquiring an exacting standard concerning masculine adiposity.

1. Society Proceedings, this issue, page 63.

THE PHYSICIAN'S FEE.

A Missouri court has decided that a physician can not take the patient's ability to pay as the standard on which to base the fee. A German court is said to have given out a similar decision. In another state a state official has been preparing indictments against physicians for adopting a uniform fee bill in a medical society. Between the two it is hard to say just what the physician should do and who should establish the standard of his remuneration. It is hard to see how anybody could better put a value on the physician's services than himself or his colleagues. The state certainly would make a poor job of it through the legislature, even if it has a constitutional right to do so in the case of the physician more than for any other class of workers. If we have reached the point that some of the English physicians think they are coming to, when the physician will be a public official, it would, of course, be all right, but we are not there yet.

Medical News

CALIFORNIA.

Communicable Diseases.—Diphtheria is reported at Alturas and Willows.——Two new cases of smallpox have been discovered in Stockton.

Inspectors Appointed.—The State Board of Health has appointed five inspectors, whose duty it is to inspect the bodies of the dead of the coast and bay cities and counties, where there are suspicions that bubonic plague existed.

Licenses Revoked.—The board of health of Los Angeles, by a vote of 3 to 2, on December 13, revoked the license of the German Drugless Sanitarium in that city; the three medical members of the board voted to revoke the permit and the two lay members are said to have opposed the action.

Fight Against Tuberculosis.—At the annual meeting of the Southern California League for the Prevention of Tuberculosis, held in Riverside, it was voted to change the name of the association to the California Association for the Study and Prevention of Tuberculosis, and to affiliate with the national and international associations. Dr. George H. Kress, Los Angeles, was elected secretary of the association.

Hospital Notes.—The plans of the five hospitals, at an approximate cost of $50,000, were presented to the San Francisco Relief and Red Cross corporation, December 10.——A new site for the Northern California Hospital at Eureka has been purchased for $5,500.——After ten years the Gilroy Private Hospital closed its doors December 31.——The new Siskiyou County Hospital at Yreka is now nearly completed and ready for occupancy.——A fire in Lane Hospital, San Francisco, threatened the destruction of the building and endangered the lives of the patients December 18, but prompt action on the part of the attendants averted a calamity.

Society Meeting.—At the annual meeting of the directors of the San Francisco County Medical Society, held December 17, Dr. Charles G. Levinson was elected president, and Dr. Arthur A. O'Neill, secretary, both of San Francisco.——At the annual meeting of the Santa Clara County Medical Society, held in San José, December 18, the following officers were elected: President, Dr. Peter A. Jordan, San José; vice-presidents, Drs. William S. Van Dalsem, San José; William F. Snow, Stanford University, and William W. Tourtillott, Morgan Hill; secretary, Dr. Kenneth C. Park, San José; treasurer, Dr. John F. Burns, San José, and councilors, Drs. William Simpson, Albert C. A. Jayet and Henry C. Brown, all of San José.

GEORGIA.

New Hospital.—At a joint meeting of the medical college officers and citizens December 12, a movement was inaugurated to give Augusta a modern hospital, at a cost of not less than $50,000. The plan is that a corporation be formed, with a capital stock of $50,000, divided into shares of $25 each. About $10,000 is already in hand for the erection of a children's annex to the hospital.

Personal.—Dr. Henry M. Fullilove, Athens, has been named councilor for the eighth district.——Dr. W. B. Spain, house physician at the Macon Hospital, has resigned on account of ill health.——Dr. William E. Wood has been elected mayor of Dalton.——Dr. James T. Ross has been appointed president of the board of health of Macon.——Dr. John B. Rudolph has been elected mayor of Gainesville.

Elections.—At the annual meeting of the Richmond County Medical Society, held December 11 in Augusta, the following officers were elected: Dr. Eugene E. Murphey, president; Dr. William C. Kellogg, vice-president; Dr. George A. Traylor, secretary (re-elected); Dr. Charles W. Crane, censor, and Drs. Charles J. Montgomery and William A. Mulhern, delegates to the state association, all of Augusta.——The Ware County Medical Society held its annual meeting at Waycross, December 5. Dr. Robert P. Izlar, Waycross, was elected president; Dr. James C. Rippard, Waycross, vice-president; Dr. A. Fleming, Astoria, secretary-treasurer, and Dr. John L. Walker, Waycross, censor.——At the annual meeting of Chatham County Medical Society, held in Savannah, December 11, the following officers were elected: Dr. Thomas J. Charlton, president (re-elected); Dr. Joseph G. Jarrell, vice-president; Dr. J. M. Sigman, secretary; Dr. Marion R. Thomas, treasurer; Drs. John L. Farmer, Marion X. Corbin and Matthew F. Dunn, censors; and Drs. Thomas P. Waring and George R. White, delegates to the state association.——At the annual meeting of Muscogee County Medical Society, held in Columbus, December 5, Dr. Benjamin W. Allen was elected president; Dr. William T. Gautier, vice-president; Dr. Martin Crook, secretary; Dr. Thomas E. Mitchell, treasurer; Dr. Henry S. Munroe, censor, and Dr. Charles A. Dexter, delegate to the state association, all of Columbus.

ILLINOIS.

Communicable Diseases.—It is estimated that there are 50 cases of smallpox at Ridott, 20 miles west of Rockford.——At Havana there are said to be 35 cases of smallpox, almost all of mild type.——Diphtheria is said to be prevalent at Greer College, Hoopeston.

A Valuable and Accessible Library in Jacksonville.—The annual report of Dr. Carl E. Black, librarian of Morgan County Medical Society, shows what a valuable array of indexed literature is at the disposal of the members of this society. The library contains 1,729 volumes, well indexed, and the current medical literature consists of an excellent selection of representative medical publications, the contents of which have been systematically indexed by the Dewey system, making the subjects immediately accessible to any physician who wishes to look up a certain subject. The society is to be congratulated on its excellent facilities.

Chicago.

Death of Dr. Senn.—Dr. Nicholas Senn, who has been critically ill for some weeks, died at 1:25 p. m., Thursday, January 2. An extended notice will appear next week.

Physician Exonerated.—Dr. William A. Bennett, charged with the performance of an illegal operation which caused the death of a young colored woman, has been exonerated by the verdict of a coroner's jury.

Fire in College.—Fire in the Senn Memorial Building of Rush Medical College, December 24, caused great alarm in the hospitals near by. The fire was caused by the explosion of a gas meter, and was extinguished with little damage.

To Protect Workingmen.—The health commissioner is formulating plans for decreasing the mortality among the members of various trades, from so-called trade diseases, by the systematic dissemination of information regarding the causation and prevention of these diseases.

Hospital Association Formed.—The Chicago Hospital Association was organized December 21 at the Presbyterian Hospital, its membership being restricted to hospital superintendents. Asa Bacon, superintendent of the Presbyterian Hospital, was elected president; Charles T. Garrard, Chicago Eye and Ear Infirmary, vice-president; Anna L. Davis, Frances Willard Hospital, secretary, and Dr. Lawrence Ryan, St. Anthony of Padua Hospital, treasurer.

INDIANA.

Epileptic Village Nears Completion.—It is expected that the two cottages of the State Epileptic Village, north of New Castle, will be ready to receive patients January 1. The village now has 11 inmates.

Hospital News.—The Delaware County Hospital Association, Muncie, has purchased a site in that city and will at once proceed to equip a 30-room hospital.——The contract has been let for a new wing to St. Anthony's Hospital, Terre Haute, to cost $70,000; the addition will be four stories in height and 46x118 feet.

Communicable Diseases.—South West reports 4 new cases of smallpox; Elwood, 30; Alexandria, 10, and 21 are reported in the surrounding townships.——Diphtheria is reported from Evansville, and the Greenbriar school near Richmond.——Oswego is said to have an epidemic of measles which has caused the closure of the schools.

Personal.—Dr. Fred C. Dilley has been appointed health officer of Brazil, vice Dr. Samuel G. Hollingsworth, resigned.——Dr. Thomas B. Eastman, Indianapolis, severed an artery in the wrist by a glass wound in an Interurban wreck near Crawfordsville, recently.——Dr. Charles L. Armington, Anderson, was presented with a gold-headed cane in appreciation of his address at the annual memorial exercises of the Alexandria lodge of Elks, December 1.——Dr. Pierre G. Fermier, Leesburg, is reported to be seriously ill.——Dr. Harry H. Long has been appointed secretary of the La Porte County board of health.——Dr. F. C. Lamar has been appointed secretary of the board of health of Hagerstown, vice Dr. Eli H. Thurston, resigned.

November Diseases and Deaths.—During November the most prevalent diseases were bronchitis, tonsillitis and typhoid fever. Rheumatism and influenza were reported from every county; pneumonia and typhoid fever were less prevalent; diphtheria in mild form was reported epidemic in many localities, and during the month 31 schools were closed on this account. Smallpox was reported from 19 counties, but with no deaths, and in almost every case of mild type. An epidemic of diphtheria existed at Plainfield. The total number of deaths during the month was 2,543, equivalent to an annual mortality rate of 11.5 per 1,000, while during November, 1906, the rate was 13.3 per 1,000. The death causes were as follows: Consumption, 292; pneumonia, 245; violence, 175; cancer, 117; typhoid fever, 76; diarrheal diseases, 43; diphtheria, 36; puerperal fever, 14; influenza, 13; scarlet fever, 7; cerebrospinal meningitis, 9, and measles and whooping cough, each 3.

KENTUCKY.

Louisville Personal.—Dr. Granville S. Hanes, Louisville, has returned from Europe.——Dr. Ben C. Frazier has been ill with an infected wound of the foot.——Dr. Thomas H. Baker has resigned from the tuberculosis board of Louisville.

Register of Tuberculous Patients.—The Kentucky Antituberculosis Association expects, in the next few months, through the efforts of the county health officers and the state medical society, to have every case of tuberculosis in the state registered, and to provide thorough fumigation for every apartment occupied by such patients.

MARYLAND.

Personal.—Dr. James H. Billingslea, Westminster, has been elected president of the Maryland State Turnpike Association.——Dr. Richard P. Strong, director of the United States Biologic Laboratory, Manila, is spending some time in Baltimore.

Diseases and Deaths.—The statistics of the Baltimore board of health for the week ended December 28 show the influence of the unseasonable, warm and damp weather, and also note an epidemic of influenza in the city and over a large part of the state. There were 38 deaths from pneumonia; 8 deaths directly due to influenza; 4 to bronchitis, and 8 to typhoid fever. Scarlet fever is reported to be prevalent throughout Baltimore.

Novel Use of Transfers.—The backs of street-car transfers used in Baltimore during February and those used on Sundays during March will contain the following warning against tuberculosis:

Consumption can be cured if taken in time. Do not neglect a cold, or such premonitory symptoms as slight cough, fever and loss of weight, but consult a good physician at once.
Consumption is contracted through the spit of consumptives.
Friends of Consumption—Dampness, dirt, darkness, drink.
Enemies of Consumption—Sunshine, cleanliness, fresh air, nourishing food.
An ounce of prevention is worth a pound of cure. Whether you have tuberculosis or not, do not endanger the health of your family and friends by careless spitting.

MASSACHUSETTS.

Communicable Diseases.—The first case of smallpox in Boston for a long time was reported, December 18, in a patient who had come from St. John, N. B., a few days before.——A large number of cases of diphtheria and scarlet fever is reported in Springfield.——An epidemic of influenza is reported

to be raging in Smith College, Northampton, and Wellesley College.——Influenza is reported to be spreading rapidly in Boston.

Hospital News.—Mrs. Caroline A. Dring, Fall River, has donated $10,000 to the Union Hospital, $5,000 to be used for construction purposes, $2,500 for medical books, and the balance for a tablet, furniture and book plates.——By the will of the late M. A. Fenton, $5,000 is devised to the Lynn Hospital. ——The Massachusetts State Commission on Hospitals for Consumptives is actively engaged in locating and planning the three hospitals provided for in the act.——The Common Council of Boston has appropriated $17.000 for the erection of buildings for the consumptive hospital at Mattapan.

Pharmacists Entertain Physicians.—The New England Branch of the American Pharmaceutical Association celebrated its second anniversary by entertaining fifty physicians in its jurisdiction at the Hotel Vendome, Boston, December 5. The proceedings of the evening dealt chiefly with the value of pharmacopeial as opposed to proprietary preparations, and the consensus of opinion was in favor of preparations named in the U. S. Pharmacopeia and National Formulary, and bore out in full the analyses and results obtained by the Council on Pharmacy and Chemistry of the American Medical Association.

Personal.—Dr. Theobald Smith, Boston, had conferred on him the degree of LL.D. at the recent convocation of the Chicago University.——Dr. Nebuther Holden, Southampton, has moved to Everett.——Dr. Felix D. Fontaine, Worcester, was given a banquet, in honor of his seventy-fifth birthday, December 14. ——Dr. Frank D. Stafford has been elected mayor of North Adams.——Drs. Irving Packard and Edwin Browne of the house staff of the Relief Hospital, Boston, are ill with influenza.——Dr. John O'Shea, house physician of the City Hospital, Boston, who has been seriously ill, is said to be recovering.

MICHIGAN.

Hospital Notes.—The Cadillac Hospital, given by Mr. and Mrs. D. F. Diggins to the city, is almost complete and will be formally opened next week. The Sisters of Mercy of Big Rapids will be in charge of the institution.——The Woman's Hospital at Pontiac has already $8,000 in hand, and the work of building the hospital will begin early in the spring.

Personal.—Dr. Charles F. Smith, Whitehall, and not Dr. Anson A. Smith, Muskegon, as erroneously announced, was elected alternate delegate to the state society from the Muskegon-Oceana County Medical Society.——Dr. Edward D. Kremers, Holland, has been elected secretary of the Anti-Tuberculosis Society recently organized by the Ottawa County Medical Society.——Dr. F. G. W. Fosdick has succeeded Dr. Henry C. Maynard, resigned, as health officer of Hartford.

Communicable Diseases.—About 60 cases of smallpox are reported from Manistee.——Springport reports 30 cases of smallpox.——East Lake has 11 cases of smallpox.——About 14 cases of smallpox are reported in Saginaw.——During the first 20 days of December 124 cases of smallpox were reported in the state from about forty localities.——Scarlet fever is reported from Oakwood.——The Michigan Military Academy, Orchard Lake, has been closed on account of the prevalence of diphtheria.

Seasonable Prevalence of Communicable Diseases.—The State Department of Health has issued a leaflet on preventable diseases showing their seasonable prevalence. Pneumonia was most prevalent in January, February and March; tuberculosis in March, April and May; typhoid fever in August, September and October; diphtheria in October, November, December and January; meningitis in March, April and May; whooping cough in June, December and January; scarlet fever in November, December and January; measles in February, March, April, May and June, and smallpox in January, February, March, April, May and December.

MINNESOTA.

Free Vaccine Virus.—On and after January 1 the State Board of Health will manufacture and distribute vaccine virus free to health officers throughout the state.

Hospital News.—A new detention hospital for the insane is to be erected on the grounds of the State Hospital, Fergus Falls, at a cost of $65,000, and a contagious ward is to be constructed at a cost of $10,000.——The St. Paul German Hospital has been incorporated by Rev. David Lebahn, Herman Hanstein and Herman A. Drechsler.

Personal.—Dr. and Mrs. Leonard F. Schmauss, Mankato, sailed from Bremen on their return December 28.——The house of Dr. Charles G. Weston, Minneapolis, was destroyed by fire recently.——Dr. Henry O. Schaleben, Thief River Falls, has gone to Iliamna, Alaska.——Dr. Willis H. Pratt has resigned as city physician of Stillwater and has been succeeded by Dr. James H. Haines.

Communicable Diseases.—An epidemic of diphtheria is reported at Big Falls. Schools have been ordered closed and public gatherings for the time being are prohibited.——Smallpox continues to be prevalent at Two Harbors.——Since August 20, 284 cases of smallpox have been reported in the state. There are now 24 smallpox patients in the Quarantine Hospital, Minneapolis.——Hibbing now has 14 cases of smallpox. ——Nearly 20 cases of smallpox are reported in the vicinity of Freeport.——The schools of Farmington have been closed on account of scarlet fever.——Scarlet fever is reported to be epidemic near Wolverton.——Diphtheria is said to be spreading rapidly in and around St. Cloud.

MONTANA.

Found Guilty.—In the case of the Silver Bow County Medical Association versus Dr. Ferdinand Gattan, Butte, charged with unprofessional conduct and violating the ethics of the medical profession by advertising in the newspapers, the defendant was found guilty by a jury of physicians, and the recommendation was made that his license be revoked, thus confirming the decision of the State Medical Board in the case a few months ago.——Dr. Isadore D. Freund, Butte, is said to have been found guilty of not reporting a case of diphtheria, and to have been fined $25.00.

Communicable Diseases.—During October, 255 cases of typhoid fever, 165 cases of diphtheria, 31 cases of scarlet fever, 13 cases of smallpox, and 9 cases of measles were reported in the state.——A child of 6, on a Northern Pacific passenger train, was found ill with smallpox at Livingston; the passengers in the car were quarantined, and the car was sidetracked. ——Smallpox is reported to have broken out on the Crow Indian Reservation, where five cases have appeared.——Scarlet fever is reported to be spreading rapidly in Great Falls.

Personal.—Dr. Laura Keisker, Butte, Secretary of the Silver Bow Medical Association, has been appointed expert and special agent to investigate the labor conditions among the women and children in the Middle West and Atlantic States, with headquarters at Washington, D. C.——Dr. Charles K. Vidal, Belt, has been appointed physician of Cascade County.——Dr. Robert P. R. Gordon, Great Falls, who was operated on in Rochester, Minn., October 23, has returned.——Dr. Edgar F. Dodds, Missoula, is reported to be ill with diphtheria, at the home of his mother, in Macon, Ill.——Dr. Louis Bernheim, Butte, has been acquitted of the charge of criminal assault, preferred by the mother of one of his patients. Dr. Bernheim has been seriously ill with angina pectoris.

NEW HAMPSHIRE.

Communicable Diseases.—There are said to be about 20 cases of diphtheria in Nashua.——The increase in diphtheria in Peterboro has compelled the Board of Health to order the closure of all schools and to prohibit church and social gatherings.——On account of the prevalence of diphtheria, the Lincoln Street and Straw schools, Manchester, have been ordered closed.

Personal.—Dr. August Guertin, Nashua, has been appointed assistant surgeon in the First Regiment, N. H. N. G., with rank of captain. Dr. Norman B. Webber, Manchester, has been commissioned major and surgeon. Dr. Richard H. Dillon, Manchester, major and surgeon, and Dr. Zenon Lavoie, Manchester, captain and assistant surgeon, have resigned.—— Charles P. Health, a senior medical student, was drowned in Big Diamond Pond, near Colebrook, November 29, while hunting.

County Society Meetings.—At the annual meeting of the Rockingham County Medical Society, held in Portsmouth, Dr. John J. Berry, Portsmouth, was elected president; Dr. Abram W. Mitchell, Epping, vice-president; Dr. Walker Tuttle, Exeter, secretary; Dr. Alice M. Chesley, Exeter, treasurer, and Dr. William H. Nute, Exeter, censor.——At the annual meeting of the Grafton County Medical Society, held in Woodsville, December 10, Dr. George W. McGregor, Littleton, was elected president; Dr. George W. Hazelton, Haverhill, vice-president; Dr. George A. Weaver, Warren, secretary-treasurer; Dr. Edgar O. Crossman, Lisbon, delegate to the state medical society, and Dr. Milton S. Woodman, West Lebanon, alternate.

NEW YORK.

Rabies in Rochester.—The entire county of Monroe has been quarantined because of the positive proof that this disease was in Rochester and surrounding towns. This rigid quarantine has been considered necessary because so many dogs at large have bitten live stock, killed chickens, etc.

Crusade Against Tuberculosis.—State Health Commissioner Porter has been promised the assistance of Governor Hughes to secure from the legislature at its coming meeting, an appropriation of $50,000, to fight tuberculosis in the state. The commission includes among its members the following: Drs. Willis G. MacDonald, Albany; Edward B. Baldwin, Saranac Lake; Thomas Darlington, health commissioner of the city of New York; George W. Coler, Rochester; Alfred Meyer, New York City; Veranus M. Moore, Ithaca; John H. Pryor, Buffalo; William H. Watson, Utica, and Livingston Ferrand, secretary National Congress on Tuberculosis, New York City, and Homer Folks, New York City.

New York City.

The Harvey Society Lecture.—Prof. Ernest H. Starling of the University of London will give a lecture on January 11, in the New York Academy of Medicine, on "The Chemical Control of the Body."

Andrews Resigns.—After serving the Medical Society of the County of New York for seven years, its counsel, Champe S. Andrews, has resigned. His resignation has been accepted with general regret. He has been prominent in all the fights against clandestine or unlicensed practitioners and healers, so-called.

Epidemic of Heart Disease.—The health department finds that in this city the people live too fast, worry too much, require more exercise; as a result, for the first eleven months of the year 1907 there have been just 1,246 more deaths from heart disease than last year. There is no doubt but that the epidemic of influenza now prevailing has much to do with this increase in the mortality rate from cardiac disease.

Vaccinating After Midnight.—More than 20,000 lodging-house habitués were vaccinated before daylight by the physicians connected with the health department during the week ended December 28. Each of the doctors, accompanied by a policeman, was assigned to a lodging house; each of the lodgers was compelled to come downstairs and roll up his sleeves. The fire escapes were well guarded to prevent the escape of those not willing to be vaccinated.

New York Herter Lectures by Professor Starling.—Ernest H. Starling, professor of physiology in the University of London, will give the Herter Lectures of the year on the subject "The Fluids of the Body," beginning January 6 at 4 p. m. and continuing at the same hour throughout the week at the Carnegie Laboratory of the University and Bellevue Hospital Medical College, 338 East Twenty-sixth Street. All interested are invited.

Hebrew Charities Federated.—A meeting was held in Mount Sinai Hospital on December 14 at which ten of the great Hebrew charitable and philanthropic organizations of the city federated under the name of "the Council of Jewish Communal Institutions." The purposes of this federation are many. It is to consider purely local problems affecting Jewish eleemosynary institutions and to aid in their solution. It is to coördinate the work now done independently in the various institutions and is to work out an economical system of buying by cooperation. This new council supersedes the Federation of Organized Charities which was started about a year ago as a sort of clearing-house for charities.

PENNSYLVANIA.

Physicians Combine Against Common Evil.—The physicians of Altoona, representing the different schools of medicine, have combined with the view to prosecute and drive out a number of quacks and charlatans who have been practicing in that city.

Typhoid in Pittsburg.—With the pumping of the first filtered water from the new filtration plant in this city, December 21, Dr. James F. Edwards, superintendent of the bureau of water, made a recapitulation of what he calls "Pittsburg's thirty-year epidemic of typhoid." Since 1878 50,200 people have been stricken with typhoid fever in Pittsburg and 7,615 have died. Last year there were 5,729 cases and 608 deaths. His report further shows that one person out of every 36 had typhoid fever during the year, and that one out of every 10 who were stricken, died.

Officers Elected.—At the annual meeting of the Somerset County Medical Society the following officers were elected: President, Dr. Charles P. Large, Meyersdale; vice-president, Dr. William P. Shaw, Berlin; secretary and reporter, Dr. Henry C. McKinley, Meyersdale; treasurer, Dr. Walter S. Mountain, Confluence, and financial secretary, Dr. Bruce Lichty, Meyersdale.——At the annual meeting of the Washington County Medical Society the following officers were elected: President, Dr. Thomas D. M. Wilson, Washington; vice-president, Dr. Robert E. Conner, Hickory; secretary, Dr. John B. Donaldson, Canonsburg, and treasurer, Dr. Robert E. Thompson, Washington.

Vital Statistics.—The report of the State Department of Health, which will be issued in a short time, will show that 123,132 deaths occurred in this state during 1906. Of this number 8,679 were stillbirths. The death rate per 1,000 of population was 16.5. On a division of population into urban and rural on the basis adopted by the United States Census Bureau, namely, the classification of all boroughs under 8,000 population together with townships as rural, the urban rate was 18.1 and the rural 15.1 per 1,000. The greatest number of deaths occurred in August and the lowest in June, while the spring months furnished the lowest quarterly rate. Of the total deaths 62,642 were males and 51,793 were females, giving a death rate per 1,000 of 17.8 for males and 15.2 for females. Of all deaths 34 per cent. were of children under 5 years of age and 24.3 per cent. children less than one year old. The death rate per 1,000 of the native population was 14.5; of native males 15.4, and of native females 13.4. The death rate per 1,000 of foreign-born population was 21.2; of foreign males, 22.8, and of foreign females, 19.3. The death rate per 1,000 of whites was 16.2 and of blacks, 27.5.

Philadelphia.

Personal.—Dr. Samuel G. Dixon was elected president of the Academy of Natural Sciences December 17, and Dr. Thomas H. Fenton was at the same time made a curator.

Bequests.—The will of the late George Hirschfeld bequeaths $1,000 each to the Jewish Hospital and the Jewish Foster Home, and $100 to the Jewish Maternity Hospital.

Hospital Elections.—At the annual meeting of the corporators of the Rush Hospital for consumption and allied diseases, December 15, Dr. T. Mellor Tyson was elected secretary, and Drs. James Tyson and Edward Kerr were elected members of the board of management.

Lister Club Organized.—The Lister Club has been formed with 20 charter members, by a number of men interested in abdominal surgery, gynecology and obstetrics. The club is to be both scientific and social in character. It will hold three meetings a year, and at each meeting a scientific program is to be given, and a supper will be served. The scientific work is to be conducted along practical lines and presented in an informal manner.

New Municipal Hospital.—Plans for the additional buildings that will be required for the new Municipal Hospital have been completed. There is available for this purpose $250,000, and this sum will be used for the erection of the administration building and the smallpox pavilion. It is hoped to have the institution ready for the reception of patients by the autumn of 1908.——A contract has been awarded for interior alterations and additions to the Philadelphia General Hospital and the cost of the work will be $11,000.

Jefferson Hospital Changes.—By the appointment of an additional committee, the trustees of the Jefferson Hospital intend to enlist the aid of women in the general administration of the new institution, as well as in the care of the maternity department. It is the intention to appoint a visiting committee of 50 women, which will include sub-committees on college, maternity and hospital work. The Maternity Hospital, formerly conducted as a separate institution, will hereafter be combined with the Jefferson Medical College Hospital proper.

Health Report.—The total number of deaths reported for the week ended December 21 was 499, a decrease of 69 from those reported in the previous week and a decrease of 27 from the number reported in the corresponding week of 1906. The principal causes of death were: Typhoid fever, 17; diphtheria, 10; influenza, 7; consumption, 50; cancer, 20; apoplexy, 27; paralysis, 5; heart disease, 47; acute respiratory diseases, 86; enteritis, 20; cirrhosis of the liver, 8; acute nephritis, 5; Bright's disease, 34; congenital debility, 10; old age, 10; suicide, 4; accidents, 7, and marasmus, 5. There were 231 cases of contagious diseases reported, with 20 deaths, as compared with 219 cases and 27 deaths reported in the preceding week.

TENNESSEE.

Hospital Notes.—The Woman's Hospital, Nashville, is to be enlarged by building a wing to contain 50 rooms, which will be larger than the present building.——Dr. William L. Nolen has opened a private hospital in Chattanooga.

Dr. Krauss and the Combs Chemical Company.—Some weeks ago Dr. Wiliam Krauss, Memphis, Tenn., wrote to certain med-

ical journals that were carrying the advertisement of the Combs Chemical Company, calling attention to this concern and its relation to Charles B. James, formerly of the Memphis Keeley Institute (now defunct), the James Alkaloidal Company, etc. The editor of one of the medical journals written to turned Dr. Krauss' letter over to the Combs Chemical Company, and the latter applied for an injunction to restrain Dr. Krauss from writing more letters derogatory to it. When the matter came up for trial the injunction was dissolved.

Personal.—Dr. Charles M. Drake has been elected assistant chief of the staff of the Knoxville General Hospital; Dr. J. B. Johnson, visiting obstetrician; Dr. John M. Kennedy, visiting pediatrician; Dr. Albert G. Kern, visiting surgeon, and Dr. John F. Massey, visiting physician.——Dr. Jack S. Dye, Chattanooga, has been appointed local surgeon of the Chicago New Orleans & Texac Pacific, and Alabama Great Southern railways, the Belt Line and the Chattanooga Railways Company.——Dr. J. L. Kelly, interne at the City Hospital, Memphis, is reported to be seriously ill with septicemia.——Dr. E. A. Reed, Knoxville, is said to have been fined $50 by the recorder on the charge of illegal sale of cocain.

GENERAL.

Southern Surgical Meeting.—At the twentieth annual meeting of the Southern Surgical and Gynecological Association, held in New Orleans, Dec. 17-19, 1907, the following officers were elected: President, Dr. F. W. Parham, New Orleans; vice-presidents, Drs. Willis F. Westmoreland, Atlanta, Ga., and Henry D. Fry, Washington, D. C.; treasurer, Dr. Stuart McGuire, Richmond, Va.; secretary, Dr. William D. Haggard, Nashville, Tenn. St. Louis was selected as the place for holding the next annual meeting in 1908. A report of the scientific proceedings will be commmenced in the next issue of THE JOURNAL.

Tuberculosis Society to Meet.—The fourth annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held in Chicago, June 5 and 6, 1908. The organization of the sections has been arranged as follows:

SOCIOLOGICAL SECTION—Mr. Ernest P. Bicknell, Chicago, chairman; Mr. Alexander M. Wilson, Chicago, secretary.
CLINICAL AND CLIMATOLOGICAL SECTION — Dr. Henry Sewall, Denver, chairman; Dr. H. W. Hoagland, Colorado Springs, secretary.
PATHOLOGICAL AND BACTERIOLOGICAL SECTION—Dr. L. Hektoen, Chicago, chairman.
SURGICAL SECTION—Dr. A. E. Halstead, Chicago, secretary.
SECTION OF TUBERCULOSIS IN CHILDREN—Dr. William F. Cheney, San Francisco, chairman.

FOREIGN.

Academic Prize for Woman Medical Student.—The University of Heidelberg recently conferred the Moos prize on Maria Kobele, a medical student from Baden. The prize amounted to $225. It is stated to be the first time in Germany that an academic prize has been conferred on a female medical student.

Memorial to Brehmer.—The twenty-ninth German Balneologic Congress is to convene at Breslau, March 5. The general secretary of the congress is Dr. Brock, Berlin, N.W., Thomasiusstrasse 24. A memorial to Herman Brehmer, the inaugurator of sanatorium treatment of tuberculosis, is to be unveiled during the assembly.

Charlatans Sentenced in Germany.—One recent issue of a German exchange reports four cases in which charlatans were condemned to three, thirteen or eighteen months' imprisonment, with or without fines of $50, for injuries resulting from their practices. The suits were brought at Leipzig, Hamburg, Strasburg and Essen. At Wiesbaden two persons were fined $10 and $100 for calumniating a physician.

Abuse of Cocain as Extenuating Circumstance.—A German exchange states that a teacher involved in a criminal suit appealed for milder judgment on account of his addiction to cocain. He presented evidence to show that he had purchased $50 worth of cocain in the course of three or four months, and for several years had bought large amounts. Our exchange comments that it seems inconceivable that a layman could purchase such large quantities of such a dangerous poison merely from the drug stores.

Plague in China and Japan.—Consul-General Fowler reports the existence of bubonic plague at Tengchowfu, near Chefoo, and that information from Chefoo states that in the city of Tengchow bubonic plague was prevalent November 5, three or four persons in one family often dying within a few days of one another. The area of the infected portion of the city is constantly enlarging. Reports indicate that there have already been from 80 to 100 deaths. Sick, dying and dead are often transported to the country, and it is reported that the disease has broken out in several places in two or three counties. A further report, dated November 14, adds that in one shop a brick bed was torn out and three or four dead rats were found. The mason and one of the employés in the shop were taken ill almost at once and died within a day or two. Another man was also taken ill.——Passed Assistant-Surgeon Cumming reports from Yokohama that plague continues severe at Osaka and the whole city is said to be infected. A severe and fatal epidemic of plague is reported from the Goto Islands in Nagasaki ken, about 60 miles from the city.

Professional Secrecy and Knowledge of Crime.—At the meeting of the Berlin Medical Society October 30, one of the members reported a case of remarkable injury of the uterus during efforts at auto-abortion. After describing the details, he stated that the patient in question was waiting, heavily veiled, in the anteroom and was willing to allow the members to examine her. The president of the society interrupted the speaker with the remark that he had hitherto supposed that only an anatomic preparation was to be presented, and that he could not permit a person who had been guilty of a crime to be presented at a public meeting, as this might entail judicial consequences. This statement of the president was received with unanimous applause by the members present, and the speaker was not allowed to conclude his report. It was published in full, however, in the society proceedings. Kohn discusses the subject in the *Berl. klin. Wochschr.*, December 2, stating that the legal status of professional secrecy is still undetermined, citing Rubinstein's denunciation of a murderer, although the murderer had become known to him only by his applying for treatment of a wound received during the assault. He also refers to the case in which a Berlin physician warned the mother of a recently vaccinated child against a niece living with her whom he was treating for syphilis at the time. The Court of Appeals acquitted the physician after sentence by a lower court in the suit brought by the syphilitic. The judge in this case approved the physician's realization of a moral obligation. Professional secrecy and its violation are consequently matters left to the discretion of the physician, but in case he conflicts with the established rulings he must realize the possible dangers of such a course.

LONDON LETTER.

(*From Our Regular Correspondent.*)

LONDON, Dec. 14, 1907.

Anuual Report of British Army at Home and Abroad for 1906.

The director general of the British Army Medical Department, in his report, states that the admissions to hospital have fallen steadily during the past sixteen years, from nearly 1,060 per 1,000 of strength to fewer than 600. To a certain extent this has been due to the introduction of the system of treating a considerable number of cases as outpatients, but the fall began some years before the introduction of this system. All diseases have shared in the general reduction. "It is probable," Sir Alfred Keogh states, "that one great cause of this is the increase of temperance in the army during recent years, but the greater proportion of the improvement may fairly be attributed to improved sanitation, both as regards the housing and clothing of troops, and also as regards increased knowledge of how to combat disease, not only on the part of the medical department of the army, but that of the army in general." The report points out that taking all diseases the United States heads the list with the enormous admission rate of 1,250 per 1,000.; the French, German and Austrian armies are all above 600; the British army serving in the United Kingdom comes fifth, and lowest of all is the Russian army, with 324 admissions per 1,000. As regards death rates, the American Army leads with a ratio of 6.14 per 1,000; the British and French armies come next with a figure about half of America's, while the German army is the lowest of all. These figures are, however, subject to certain explanations and reservations which are sent out. South Africa takes the first place for healthiness of all foreign groups, and India is the highest, both in death rate and constant inefficiency due to sickness.

Fog Dispersal.

The London County Council, according to the *Journal of the Royal Institute of Public Health* for December, has under consideration an apparatus for the dispersal of fog, invented by Signor D. Maggiora, which consists of strong steel cannons 60 feet high and 6 feet in diameter, which are used for the explosion of acetylene gas. Sir Oliver Lodge has attacked the problem by high tension discharges of electricity, and had an installation at work at the University College, Liverpool,

which cleared away fog for a radius of 100 yards from the point of discharge. Since this time experiments have been made by using a rectifier invented by Mr. Cooper Hewitt, who, if we mistake not, is an American, and an arrangement has been fixed at the University College buildings in Birmingham and connected with the ordinary 200-volt continuous current mains of the Birmingham corporation. This current is passed through a Caldwell break and then to the preliminary terminals of the coil, being connected to a battery of the rectifiers, from which is derived a continuous current, at from 200,000 to 500,000 volts.

Notification of Births Acts in Great Britain.

As mentioned in THE JOURNAL a few weeks ago, a new act has been framed for adoption in Great Britain, whereby the birth of children must be reported within thirty-six hours from birth. The onus of performing this duty is first thrown on the parents, and failing these, on the medical man in attendance. No pay is attached to this responsible service, and medical men are protesting in all parts of the country against the enforcement of such a law. In fact, it has been repudiated in Manchester, and at a recent meeting of the corporation of Dublin the question has been postponed for one year.

Prevalence of Scarlet Fever in London.

Scarlet fever has been remarkably prevalent in the metropolitan area during the past few months. It is proposed that an enquiry into the matter should be instituted by the Loyal Government Board, as compulsory notification and the provision of isolation hospitals at a large cost to the public have not been followed by any conspicuously good effects. Although the modern policy of isolation does not seem to have decreased the prevalence of the disease, the mortality rate has shown a most gratifying improvement; the death rate in 1906 was only 2.9 per 1,000.

Anesthetics at Guy's Hospital.

At Guy's Hospital, London, there have occurred during the past few years a somewhat remarkable number of fatalities from the employment of anesthetics. In the course of the last six and a half years, there have been no less than thirty-eight deaths from that cause or an average of almost six patients a year. On the face of it this looks an alarming death roll, but when the fact is taken into consideration that nearly 18,000 persons are anesthetized yearly at Guy's Hospital, these feelings of surprise are somewhat modified. However, it is recognized that this death rate should be decreased, and a large committee has the question under consideration.

Dr. Haffkine and the Prevention of Plague.

Dr. Haffkine, who has done such valuable work in the investigation of plague in India and in the introduction of a prophylactic, has been under a cloud since the lamentable catastrophe in the Punjab in which nineteen persons contracted fatal tetanus after the inoculation from one of the bottles of his prophylactic. It appears clear (THE JOURNAL, March 2, 1907, p. 811) that the accident was not due to anything wrong in the prophylactic, but to opening the bottle with a forceps which had been dropped on the ground and which was not sterilized before use. Dr. Haffkine has been supported in his unmerited disfavor with the authorities by all the prominent scientists of Great Britain interested in the plague question, and the government has at last yielded to the pressure and reemployed him on honorable terms. In an important address delivered to the Epidemiological Society on the "Present Methods of Combating Plague," he described the present position of inoculation as follows: 1. Natives of India are more susceptible to plague than Africans, Europeans and some other races, but the inoculation treatment reduces the liability to attack to less than one-third of that in non-inoculated. 2. In one-third of the cases which occur in the inoculated the recovery rate is at least double that in the non-inoculated, the ultimate result being a reduction in the plague mortality by about 85 per cent. 3. All the cases of plague in inoculated Europeans have ended in recovery. 4. Inoculation is applicable to persons already infected and incubating the plague and prevents the appearance of symptoms, or else mitigates the attack. 5. In natives of India the degree of immunity conferred by inoculation, though it gradually diminishes, lasts during several outbreaks of the plague. 6. In Europeans the effect has not yet been seen to disappear since its introduction in 1897.

Twins Die at the Same Moment.

The greater similarity between twins than among ordinary brothers and sisters, and their consequent liability to be affected by disease in the same way has long been noted, but it has seldom been illustrated in such a marked manner as the following: In the London borough of Stoke Newington, male twins, aged eighteen months, died at the same moment from bronchopneumonia. An inquest was held and the attending physician stated that in his forty years' experience he had never met a similar case. The coroner also pronounced the case the most curious he had ever encountered. In the middle ages it was thought that the same fate would happen to twins all through life and that when one was ill the other became ill, but he said that he never knew of a case in which the death of each occurred at the same moment.

Miss Florence Nightingale Honored by Two Sovereigns.

King Edward has bestowed the Order of Merit on Miss Florence Nightingale. The recipients of this order, which was instituted by him as a recognition of distinguished services to art or science, number only twenty, and Miss Nightingale is the only woman on whom it has been conferred. Her name has long been a household word throughout the world in consequence of her work in nursing the wounded in the Crimean war—an absolutely new departure, for no woman had ever taken part previously in army nursing. She volunteered to superintend the nursing arrangements and her services were accepted by the government. The so-called hospitals in the Crimea were only huge barracks and lacked almost everything that a hospital should contain. In those terrible days Miss Nightingale was known to stand for twenty-four hours receiving fresh arrivals of wounded, directing her nurses, apportioning quarters, and dealing out supplies. The hospital commissariat broke down. She started a laundry and a kitchen, cleansed the hospital of filth, and introduced some organization. She next traveled on a tour of inspection of the other hospitals and did not leave the country until the conclusion of peace. On her return she was the heroine of the hour. Poems were written in her honor. She founded the Nightingale School for Nurses at St. Thomas' Hospital with the funds subscribed as a national testimonial to her on returning from the war. She was thus the pioneer of scientific nursing in Great Britain. She is now 88 years of age, and has not left her house for twelve years. She lives in seclusion and sees only near relatives, friends, and a chosen few from the nursing world. Her face is beautiful in old age, with softly rounded cheeks, almost devoid of the lines of time. The German Emperor, who is now in London, also paid tribute to Miss Nightingale by sending her flowers.

Crusade Against Nostrums in Great Britain.

Without the slightest doubt, a vigorous campaign is to be waged against quackery in general and nostrums in particular in Great Britain. The *British Medical Journal* has taken up the matter with enthusiasm and is using every legitimate means to show the medical profession and the public the folly and even the danger of encouraging the vendors of cure-alls. The *Lancet*, too, has pursued the same line, but more soberly as befits a paper which is an epitome of British conservatism. The *Pharmaceutical Journal*, the organ of the British druggists, is of all the journals, the most strenuous in the crusade against the manner in which the proprietary medicine trade is now conducted, for those in control clearly perceive what some of the other druggist journals do not or will not recognize, that the license given to the proprietors of secret remedies is doing an infinite amount of harm to druggists, in fact, it is becoming evident that a large number of druggists are under the thumbs of these capitalists. Of course it will be a difficult, perhaps, impossible task to make the general public realize that the majority of the widely-advertised nostrums are either useless or dangerous. There is no truer saying than that the ordinary individual likes to be humbugged. One lay journal of great influence which has always made a point of exposing abuses, has recently contained some scathing arraignments of the methods of those at the head of proprietary medicine concerns. This paper, *Truth*, is endeavoring to educate the public in the matter, but, unfortunately, it does not reach a very wide audience. The lay journals of large circulation have in this respect sold their birthright for a mess of pottage, and assist in misleading their readers as to the true significance of the proprietary medicine trade. However, there are signs of an awakening, and even if the public can not be persuaded that secret remedies are in the main pernicious, then the law must step in to protect the ignorant against themselves. The *Pharmaceutical Journal*, December 7, in an editorial, says that secrecy in medicine is unscientific, and that quackery clings to secrecy as an indispensable condition, and being an unwholesome inversion of the principles of industry, shuns competition. With which statement medical men will be in cordial agreement.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Acute Pharyngitis.

The abortive treatment is the same as for acute coryza, given in THE JOURNAL, Dec. 21, 1907, page 2100.

Any mild, warm saline or alkaline gargle is soothing to the irritated pharynx, and even simple warm salt solution is efficient, if gargled in sufficient quantity. The salt solution should never be made strong, else it is irritant. A proper strength is a half-teaspoonful to a glass of warm water. Also as a gargle for this inflammation nothing is much better than potassium chlorate solution, as:

℞.	gm. or c.c.		
Potassii chloratis	10	or	ʒiiss
Aquæ	200		fl ʒvi

M. et sig.: Use as a gargle every three hours.

If there is much catarrh of the upper part of the pharynx, the mucopus should not be allowed to remain, as it tends to plug the Eustachian tubes, and air being aspirated from the middle ear congestion of the drum occurs. Hence the nasopharynx should be kept as clean as possible by spraying with some mild, warm alkaline solution. Weak suprarenal solutions may be sprayed into this region. If the catarrh tends to persist in the nasopharynx, daily insufflations of powdered boric acid are very efficient in stopping the catarrh.

If the catarrh of the nasopharynx becomes more or less chronic, a culture ground is formed in which various germs may thrive; consequently, such a condition should be carefully treated. If for any reason it can not be cured, at least methods should be daily used to keep the nasopharynx clean. The danger of such postnasal catarrh harboring the germ of cerebrospinal meningitis has been pointed out by Dr. A. Seibert, New York, in THE JOURNAL A. M. A., Nov. 16, 1907, page 1657. He recommends for the treatment of the nasopharynx in this condition a solution of equal parts of resorcin and alcohol, as:

℞.	gm. or c.c.		
Resorcinolis	25	or	ʒi
Alcoholis	25		fl ʒi

M. et sig.: For local applications by the physician.

("The alcohol must be heated before the resorcin is added.")

"A plug of absorbent cotton is wound around the end of an applicator, dipped into the above solution, and introduced into the nasopharynx. Swabbing is not necessary. Two applications, one past each side of the uvula, are sufficient. The cotton must be well soaked with the solution, but not sufficiently to cause dripping. These applications are best repeated every forty-eight hours, and six treatments usually suffice to stop all secretions of postnasal mucus in a chronic case," and two applications often suffice in recent cases. As the irritation may cause some nausea, the application should not be made directly after a meal."

Follicular Tonsillitis.

This disease is as contagious as diphtheria, and should be treated with the same local antiseptics, and the same preventive measures against giving the disease to others as diphtheria, and although fumigation is never done for this disease, it would doubtless prevent a great deal of its recurrence. The clinician often notes that several members of the same family or several persons closely associated have this disease at the same time. In cities it frequently occurs, almost in epidemics, during dusty periods when the streets are not properly watered; also, places of assemblage such as theaters become infected and from the applause that is given in such places the dust that arises from the floor is doubtless often the cause of a great many attacks of this disease.

It also seems to be proved that many attacks of acute inflammatory rheumatism begin by the germ entering the system by way of the tonsils, even if follicular tonsillitis is not present. On the other hand, an apparently typical follicular tonsillitis often precedes rheumatic symptoms.

There are doubtless several kinds of streptococci and possibly other germs that can cause follicular tonsillitis. It is often impossible also, when there is a slight exudate on the tonsils, to decide that it is not diphtheria. While a smear of the exudate on a slide stained and examined microscopically may show the Klebs-Loeffler bacillus, the positive test is that shown by a culture, which will require twenty-four hours. Hence, in every case of follicular tonsillitis the measures directed toward the treatment of the throat should be immediately and rigorously instituted, and if there is a reasonable suspicion that the infection is diphtheria, especially in children, antitoxin should be immediately used without waiting for the bacteriologic report.

If there is much general infection from the tonsillitis, as shown by a high temperature, headache and backache, one of the following prescriptions should be given:

℞.	gm.		
Camphoræ monobromatæ	10		gr. iss
Caffeinæ citratæ	15	or	gr. iiss
Acetanilidi	50		gr. viii

M. et fac capsulas 5.

Sig.: A capsule every three hours, with plenty of water.

Or five tablets similar to the above prescription may be given to a patient for administration in the same manner. If the tablets are used, they should be crushed with the teeth and taken with considerable water.

Or:

℞.	gm.		
Caffeinæ citratæ	25		gr. iv
Acetphenetidini		or	
Phenylis salicylatis āā	1 50		gr. xxv

M. et fac chartulas 5.

Sig.: A powder, with water, every three hours.

(These powders may also be put into wafers, if desired.)

If the patient is seen late in the afternoon or evening, a small dose of calomel, 10 or 20 centigrams (2 or 3 grains), given with an aloin, belladonna and strychnia tablet is the best laxative treatment. If the patient is seen in the morning, it is better to administer a saline purgative, as the Compound Seidlitz Powder or Effervescing Citrate of Magnesia.

The local treatment of follicular tonsillitis and diphtheria is the same, as follows:

℞.	c.c.		
Aquæ hydrogenii dioxidi	200	or	fl ʒvi

Sig.: Dilute with three parts of warm water and use as a gargle every three hours.

And:

℞.	gm. or c.c.		
Acidi borici	5	or	ʒi
Aquæ	200		fl ʒvi

M. et sig.: Use undiluted as a gargle every three hours.

The gargles should be used alternately, each one every three hours (one or the other every hour and a half) during the day time, and every three or four hours at night. Directly after the peroxid of hydrogen gargle the mouth should be cleansed with plain warm water or physiologic saline solution, as the secondary effect of peroxid of hydrogen is to cause irritation

in the throat. As it often tires the patient to go through the muscular process of gargling so frequently, swashing the tonsils and throat with the solutions is nearly as effective as the actual vibrations caused by gargling. Such treatment as above outlined will often stop a follicular tonsillitis in forty-eight hours.

If the patient has not much fever and is not very ill, two visits a day at the office for two days, with proper local treatment, will almost surely abort this disease. The tonsils should be swabbed with dry cotton, the exudate being thus removed. They are then swabbed with full strength peroxid of hydrogen solution and the throat is sprayed with the same, and then thoroughly cleansed with some mild alkaline solution. The tonsils and throat are next sprayed with a weak suprarenal solution, and the patient is given the above gargles for his own use.

If an exudate in follicular tonsillitis tends to persist or even to form membranous patches, insufflation of boric acid powder directly on the exudate, once or twice a day, is efficient treatment in hastening the cessation of the process.

As soon as the throat is clean, it is well to stop the peroxid gargle and to give potassium chlorate or some mild alkaline gargle in its place, and, of course, lengthen the time between the gargling.

If the patient is debilitated by the inflammation, a simple tonic is needed, as:

℞.	gm.		
Strychninæ sulphatis	04		gr. ⅔
Quininæ sulphatis	2	or	gr. xxx
Ferri reducti	1		gr. xv

M. et fac capsulas 20.

Sig.: A capsule, three times a day, after meals.

If with this tonsillitis there are joint pains, or if the patient is known to be rheumatic, or if the patient is gouty, or has shown signs of uric acidemia, it is well to administer salicylate of soda for several days, beginning as soon as the patient is seen, as:

℞.	gm. or c.c.		
Sodii salicylatis	20	or	ʒv
Aquæ gaultheriæ	100		fl ʒiv

M. et sig.: A teaspoonful, with plenty of water, three times a day, after meals.

Quinsy.

If, as often occurs, one side of the throat either in the tonsil or back of it, begins to swell and shows signs of suppuration, all irritating gargles are best omitted and nothing but hot, mild saline solutions, as one-fourth of a teaspoonful of salt to half a glass of hot water, or hot milk and water, equal parts, may be gargled, or, better, held in the throat for several moments over the inflamed side. This should be repeated every hour or two. Such measures will often abort the quinsy.

Sodium salicylate given in half-gram doses every two or three hours is an aid in the abortive treatment, but should not be continued after pus formation is evident, as it debilitates the patient.

Occasionally, cold applications at the angle of the jaw afford relief, but generally heat is more agreeable.

When it becomes evident that an abscess is forming, the sooner it is located and opened, the quicker will be the relief. The tonsils should be thoroughly swabbed with a cocain solution and punctures made with a sharp bistoury in what appears to be the most likely spot for the abscess. If this is not reached, which is more than probable at the first time, some relief is always experienced even from the slight loss of blood which these punctures entail. Constant watch should be kept for an indication of the situation of the abscess, and as soon as it can be located, again using the cocain, it should be opened freely. Taking advantage of the cocainization, as much pus should be pressed out as is possible, and at this time the throat and tonsils should be thoroughly sprayed with hydrogen peroxid solution. After the evacuation of the abscess relief is immediate, but the warm, mildly antiseptic gargles should be continued at increasing intervals through the convalescence. After the swelling has subsided a tonic containing iron is generally needed.

During the acute stage if the pain is intense, morphin is indicated and should be given.

Thrush.

Dr. J. Gordon Sharp (*British Jour. of Children's Diseases*, IV, 1907), states that he has seen seven children who have died in consequence of this condition. This disease is not necessarily confined to neglected children, but may occur among the better classes.

In treating the condition, he first cleans out the intestines with castor oil, and reduces the strength of the food to one part of milk to three parts of water, giving whey and weak beef tea in cases of diarrhea. Of course, the bottles and receptacles containing the milk should be most thoroughly cleansed.

His local treatment is as follows: A clean piece of linen or gauze is wrapped around the handle of a teaspoon, then dipped in warm water, and the entire surface of the mouth is wiped clean of the fungus growth, even to the point of causing bleeding. He next applies powdered boric acid to every part of the mouth, and also applies the boric acid to the nasopharynx, if that part is involved.

[Pure boric acid in the mouth and nasopharynx of children is rather severe treatment.—ED.]

The following is a milder method of using the boric acid:

℞.	gm. or c.c.		
Sodii boratis	2		ʒss
Glycerini	10	or	fl ʒiii
Aquæ	ad 100		ad fl ʒiv

M. et sig.: Use as a mouth wash.

While the physician himself should once a day attend to the cleansing of the child's mouth, it is only by eternal vigilance and constant care that the fungus is eradicated. Consequently after every feeding the mouth should be thoroughly cleansed, and perhaps a weak bicarbonate of soda solution, as a teaspoonful to a cup of warm water, is one of the best cleansers and at the same time soothing.

Also useful for this purpose is:

℞.	c.c.		
Liquoris antiseptici alkalini (N. F.)	200	or	fl ʒvi

Sig.: Dilute with five parts of warm water and use as a mouth wash.

If the child is nursing, the mother's nipples must be frequently and carefully cleansed with some mild antiseptic solution, as a saturated solution of boric acid. If the child is bottlefed the nipples should be kept in a boric acid solution, when not in use.

A careful arrangement of the diet, with a careful watching of the nutrition and the treatment of diarrhea and not pushing cathartics is the method that will finally produce a cure.

Adenoid Vegetations and Tuberculosis.—Roux and Roques report in the *Revue Mensuelle d. Mal. de l'Enfance*, for October, 48 cases of tuberculosis in young children with adenoid vegetations, out of a much larger number which they have encountered. All the children had enterocolitis, and Roux and Roques have previously published arguments to sustain their view that adenoiditis almost always precedes infantile intestinal disease. They believe that inflammation in the rhinopharynx is always the first reaction to invasion by the tubercle bacillus; it is the first manifestation of the defense on the part of the organism. They advise in studying the subject, that adenoid vegetations from infants between 4 and 10 months old should be selected for inoculation, and that the animals inoculated should be less than 15 days old (guinea-pigs 8 to 10 and rabbits 10 to 15 days old).

Correspondence

"Hyoscin-Morphin-Cactin Anesthesia."

NEW YORK, Dec. 24, 1907.

To the Editor:—I beg to call your attention to a passage in the article with the above title in THE JOURNAL, December 21, which seems to do injustice to our journal. On page 2106 a paragraph is quoted from the *New York Medical Journal* of October 19. The paragraph in question appeared in our advertising columns, not in our reading pages.

FRANK P. FOSTER, Editor.

[The above is true; the paragraph quoted appeared in the department of "Therapeutic Items," which is composed of "reading notices."—ED.]

Miscellany

THE PUBLIC HEALTH SERVICE.

Description of the Work and Requirements for Admission to the Commissioned Corps of the Public Health and Marine-Hospital Service of the United States.

[This article is published with the approval of Surgeon-General Wyman, and was prepared to answer in full questions regarding this service that are continually being received by us.—ED.]

I. QUALIFICATIONS FOR ENTRANCE.

Commissioned medical officers of the Public Health and Marine-Hospital Service of the United States are appointed by the President, by and with the advice and consent of the senate, and no persons are appointed until after passing a satisfactory examination in the several branches of medicine, surgery and hygiene before a board of medical officers of the said service. Examination is conducted according to rules prepared by the Surgeon-General and approved by the Secretary of the Treasury and the President. No applicant is eligible to appear before a board of examiners if his age is less than 22 or more than 30 years, and, as a preliminary to a recommendation by the Surgeon-General for appointment as assistant surgeon, the applicant must have been graduated in medicine at some reputable medical college, and must have passed a satisfactory physical, academic and professional examination before a board of commissioned officers. The applicant must submit his diploma or a certified copy thereof to the board.

Examination.—The maximum mark in any one branch of the examination is 100, and no applicant is recommended for appointment who fails to receive an average grade of 80 in the ratings on the subjects on which he is examined. All academic and professional examinations for appointment are conducted by the board, and the order of examination is: 1, physical; 2, academic; 3, professional; 4, clinical; and 5, personal (including general aptitude and moral fitness).

Physical Examination.—Any one of the following defects is considered sufficient cause for rejection: decided cachexia, permanent defects of either of the extremeties or articulations, unnatural curvature of the spine, impaired vision (not including errors of refraction corrected by glasses), color-blindness, chronic disease of the ears, deafness, chronic ulcers or cicatrices of old ulcers likely to break out afresh, chronic cardiac affections, insufficient chest expansion, hernia, sarcocele, hydrocele, stricture of the urethra or rectum, fistula in ano, hemorrhoids, varicose veins of the lower limbs (unless slight), stature less than five feet. In addition to the above, the existence of any disease, physical deformity or abnormal condition of such character as to incapacitate the candidate for the performance of duties will be cause for rejection. The examiners pay special attention to conditions that may impair efficiency or cause early placing on "waiting orders," such as hereditary diseases, overstrain of nervous system, impaired vitality from excesses of any kind. Applicants are required to certify that they believe themselves free from any ailment (mental or physical) which would disqualify them for active service in any climate.

The board examines the applicant orally as to his proficiency in general literature, language, history, and such branches of general science as they may in their discretion think pertinent.

The written examination of applicants for appointment consists of questions on: 1, Anatomy; 2, physiology; 3, chemistry; 4, materia medica and therapeutics; 5, practice of medicine; 6, practice of surgery; 7, obstetrics and diseases of women; 8, hygiene; 9, pathology and bacteriology; 10, reports on selected cases at a hospital (these cases are selected by the examiners so as to give two—one medical and one surgical case—to each applicant).

This examination further consists of such inquiries as may tend to develop the general aptitude of the person for the special duties required of a commissioned officer in the service, and to show his moral qualifications for the position of trust and responsibility which he will assume when appointed.

When practicable, applicants for appointment are required to perform such surgical operations on the cadaver as may be directed by the examiners.

II. SALARIES AND FINANCIAL PROSPECTS.

The compensation of commissioned officers is fixed at a uniform rate for each rank, as follows: Assistant surgeons-general receive $2,900 per annum, surgeons receive $2,500 per annum; passed assistant surgeons receive $2.000 per annum; assistant surgeons receive $1,600 per annum. The officer in charge of the miscellaneous division of the bureau receives $2.000 per annum. After five years' service an additional compensation of 10 per cent. on the annual salary for each five years' service is allowed commissioned officers above the rank of assistant surgeon, but the maximum rate shall in no case exceed 40 per cent. Officers placed on waiting orders for a period longer than two months, while so placed receive 75 per cent. of the pay and increase received by said officers at the date on which they were placed on waiting orders, provided that no longevity increase of pay is allowed for any period of time elapsing while placed on waiting orders.

When a commissioned officer is serving on active duty where there are no quarters belonging to the service, he receives commutation for quarters at the following monthly rates, viz: For surgeons, $50 a month; for passed assistant surgeons, $40 a month, and for assistant surgeons, $30 a month. When on duty on board a revenue cutter or quarantine vessel, or on waiting orders, officers are not allowed commutation.

Commissioned medical officers, when on duty in a foreign country, unless on special temporary duty, receive commutation at the following rates: For surgeons, $90 a month; for passed assistant surgeons, $85 a month; for assistant surgeons, $80 a month. This regulation applies also to officers serving at any port beyond the geographical limits of the United States as they existed Jan. 1, 1898. Officers traveling under orders are allowed actual expenses.

Assistant surgeons, at the expiration of five years' service, are entitled to an examination for promotion to the grade of passed assistant surgeon, and are ordered to appear before a board of commissioned officers for this purpose.

A vacancy in the grade of surgeon is filled by promotion from among the passed assistant surgeons who are eligible in the order of seniority, after having passed a satisfactory professional examination in writing in the practice of medicine, surgery, hygiene, hospital and quarantine management, and regulations of the service, in addition to a physical examination.

When an officer reports himself or is reported unfit to perform his official duties by reason of disease, injury or age, he is ordered by the Surgeon-General, if in his opinion it is necessary, to appear before a board of commissioned officers, and if it appears that it is the result of disability incurred in the line of duty, he is recommended for "waiting orders" or for special duty of a light character. The law and regulations providing for the placing of an officer on waiting orders have all the effect of retirement for disability with the additional advantage that the removal from duty may be temporary or permanent, as best fits the needs of the case.

Work of Service.—The Public Health and Marine-Hospital Service of the United States is an outgrowth of the Marine-Hospital Service, dating from 1798, when Congress passed on act for the relief of sick and disabled seamen. Congress from time to time added to the Marine-Hospital Service duties of a public health nature, as occasion arose or the need became apparent, until in 1902 its functions had become chiefly those of a public health service, and for this reason congress changed its name to the Public Health and Marine-Hospital Service, and thus made this bureau at Washington a bureau of public health. Although its public-health functions are now the most important feature of the service, the marine hospitals, 21 in number, and the marine hospital stations, 141 in number, where professional care is given to the sailors of the merchant marine, are an important branch of the service, giving opportunity for professional work. Over fifty-five thousand sailors of the merchant marine were treated during the last fiscal

year, and there were performed over eighteen hundred surgical operations requiring the use of anesthetics. A large sanatorium for the consumptive patients of the service is maintained at Fort Stanton, New Mexico.

Under the secretary of the treasury, the service administers the national quarantine laws and regulations, and to this end maintains 43 quarantine stations on the Atlantic, Gulf and Pacific coasts of the United States, and details officers in the office of the American consul at foreign ports from which vessels clear to the United States, to inspect vessels and sign bills of health in conjunction with the consular officer. It has charge of the maritime quarantine of Porto Rico, Hawaii and the Philippines. It administers the interstate quarantine regulations to prevent the introduction of contagious diseases from one state to another, and to this end when epidemics occur threatening the welfare of more than one state or territory, the service takes charge to protect the public health. It conducts the medical inspection of the millions of immigrants entering the country, and for this purpose maintains medical officers at all ports where immigrants arrive and also details officers to certain foreign ports from which many of the immigrants come. This serves to keep out the hundreds of thousands of sick and disabled, who, if entering the country would become public charges and objects of charity. It also prevents the introduction of thousands of cases of contagious diseases.

It maintains the Hygienic Laboratory in Washington for the investigation of matters pertaining to the public health. In this laboratory courses of instruction are given to officers to keep them abreast of the most scientific advances in medicine. It inspects and licenses all laboratories and establishments manufacturing and selling in interstate commerce, viruses, serums, toxins and analogous products. It inspects the manufacturing laboratories to guarantee proper methods. It buys in the open market the products of the laboratories and vaccine and antitoxin establishments and tests them for purity and proper strength, to protect the consumer and maintain a standard of strength and efficiency, that the prescribing physician may intelligently use the antitoxins, serums, etc., in the treatment of the sick. For this purpose it has established the standard unit for diphtheria and tetanus antitoxins. Licenses are granted only after inspection of the producing laboratory and examination of the finished product.

The Surgeon-General has annually, in Washington, a conference with the state and territorial boards of health, for the interchange of ideas and the establishment of uniformity of methods. The service also renders aid and cooperation to state and territorial boards of health requesting it. For this purpose the Hygienic Laboratory is used for investigation, and officers of the service are detailed for field work. Aid is also rendered to other government services and departments. It furnishes medical treatment to the officers and crews of the Revenue-Cutter Service, seamen employed on the vessels of the Mississippi River Commission, seamen employed on the vessels of the Engineer Corps of the Army, keepers and crews of the United States Life-Saving Service, officers and seamen on vessels of the United States Coast and Geodetic Survey, and seamen employed on United States Army transports or other vessels belonging to the quartermaster's department of the U. S. Army when not enlisted men of the army. It also examines, physically applicants for enlistment in the Revenue-Cutter Service and officers of same for promotion, and applicants for enlistment in the Life-Saving Service. Officers are detailed aboard revenue cutters going on extended cruises.

III OPENINGS.

The service is expansible. Its growth is limited only by the needs and demands of the people for public health work. Examinations for admission to the commissioned corps are held when there is need for additional officers. These examinations are usually held in the spring and fall. The next one will be held January 20, 1908, at Washington, D. C. Although the passing of an examination does not guarantee an appointment, for a number of years all candidates passing the required examination have received commissions.

IV. APPLICATION.

Graduates of medicine desirous of undergoing examination for the position of assistant surgeon in the Public Health and Marine-Hospital Service of the United States, must make an application addressed to the surgeon general, in their own handwriting, requesting permission to appear before the board of examiners. Applicants for examination should state their age, date and place of birth, present legal residence, and whether they are citizens of the United States, and name of medical school and college of which they are graduates, and furnish testimonials from at least two persons as to their professional and moral character. Applicants of foreign birth must furnish proof of American citizenship.

Race Suicide for Social Parasites.

In an address before a joint meeting of the Physicians' Club and the Law Club of Chicago, Dec. 13, 1907, Dr. W. T. Belfield discussed the above subject. In 1881, he said, there was approximately one murder for every 40,000 inhabitants in this country; in 1906, one for every 10,000. The other serious forms of social parasitism have increased in similar ratio. In the countries of northern Europe no such increase of crime has been observed. Thus in 1906 there were in Chicago 177 murders; in London, with three times Chicago's population, there were only 17 murders. In other words, Chicago had 33 murders to London's one, per unit of population.

Among the factors which encourage crime among us are the farcical maladministration of our medieval criminal laws; the notorious partnership between many criminals and many public officials; and the maudlin sentiment which has infinite compassion for the prisoner but none for those of us who manage to keep out of jail. Thirteen of London's seventeen murderers (two escaped arrest) were hung or imprisoned for life within a few weeks after the commission of their crimes; out of regard for our city's reputation, Dr. Belfield said he would not state the fortunes of Chicago's 177. In the protection of its citizens through the swift, sure and severe punishment of their assailants—and this is the only protection ever found effectual—Chicago compares with London, Berlin or Vienna as does an ox team with an express train for travel.

With the punishment of crime we are concerned as citizens, not as physicians. But in our professional capacity we can teach the public not how to punish but how to restrict crime by restricting the breeding of criminals. For the hordes of social parasites who crowd our costly and ever multiplying public infirmaries, breed their own kind—and the state pays the bills. Society has never placed the slightest restraint on their propagation; qualifications for a marriage license are indeed required by a few states, but marriage is nowhere essential to procreation. Society carefully rears all its defectives—criminals, imbeciles, idiots, etc.—to breed more of their kind, and robs its own worthy children to do so. The cattle breeder is wiser.

Sterilization of the male criminal by castration, though often proposed, will never meet general approval because it destroys the subject's sexual power; and while different men worship different gods, all men worship the same goddess—Venus. But sterilization can be secured with equal certainty without the slightest impairment of sexual power or pleasure simply by dividing the vas on each side—vasotomy. This little operation is performed in a few minutes under cocain anesthesia through a skin-cut less than half an inch long; it entails no wound infection, no confinement to bed; it is less serious than the extraction of a tooth. That obstruction of this tube does not impair sexuality is abundantly proved by the robust sexual health of thousands of men who have been unwittingly sterilized through bilateral epididymitis, and who never suspect their sterility until their marriages prove barren. That vasotomy itself is equally harmless to sexuality is shown by the experience of those on whom it has been performed; among these, within my personal knowledge, are married men who took this means, rather than criminal abortion, to prevent the transmission to offspring of their own hereditary taints, such as insanity and syphilis. The sterility caused by vasotomy can be subsequently cured by a slight operation which reunites the severed ends of the vas, should the subject ever desire to beget offspring. Irremediable sterility, such as is desired for the defective classes, is easily procured by removing a piece of the vas—vasectomy. Yet since these people seek pleasure rather than progeny, vasotomy is, in practice if not in theory, sufficient for them also.

The Indiana legislature passed a bill in March, 1907, authorizing the sterilization of "confirmed criminals, idiots, imbeciles and rapists" in the state institutions of Indiana. In the prison at Jeffersonville over 300 convicts under 30 years of age have been sterilized, some by authority of the state, but over 200

of them *at their own request*. This voluntary submission to sterilization by hundreds of convicts, removes the only conceivable opposition to this method of protecting society—namely, the sentimental.

The Report of the Royal Commission on Human and Animal Tuberculosis.—The second volume of the Appendices to the Report of the Royal Commission on Human and Animal Tuberculosis of Great Britain has just been issued. These appendices record the work done by individual members of the scientific staff of the commission. Dr. Cobbett's work is recorded in the present volume. His principal object was to investigate the pathogenic effects on various species of animals of tubercle bacilli obtained from cases representing so far as possible all the different clinical varieties of tuberculosis in both adults and children, and especially to ascertain whether some viruses were more virulent than others. Most of the material used was obtained at necropsies, but some, especially from glands and joints, was obtained at operations. Tuberculous sputum was also used. In each instance an emulsion was made which was either injected into the different experimental animals or into guinea-pigs from which cultures were obtained and then utilized for inoculation. The results are most important. The viruses were sharply differentiated into two classes. In one suitable doses, such as 50 mgm. of culture, produced rapidly fatal general tuberculosis in the calf and rabbit. In other words, the virus acted in exactly the same way as that of bovine tuberculosis. It may be remembered that in a previous report of the Royal Commission these two viruses were found to have similar cultural characteristics. In the other class the inoculation of 50 mgm. or even a far larger dose into calves produced only a transient disturbance of health and localized lesions which soon retrogressed. "Almost without exception the strains of tubercle bacilli fell into one or the other class." With regard to the first class of virus, Dr. Cobbett emphasizes the fact that general tuberculosis could not be produced by a small dose. The dose necessary was larger than can be supposed to be usual in infection of cattle under natural conditions. On the other hand, with the virus of the second class progressive tuberculosis could not be produced by subcutaneous inoculation of the calf, with a dose as large as 3 gm. (containing 10,000 millions of bacilli). Intravenous injection of suitable doses of the milder virus proved fatal from extensive consolidation of the lungs caused by the confluence of little infiltrated and edematous areas which arose around each collection of tubercle bacilli lodged there, but if sufficient lung was left to support life the tubercles retrogressed and the animal recovered. The same differentiation between the viruses of the two classes was found in other animals—rabbits, goats and pigs. Rats were affected by the bacilli of either class, only when administered in enormous doses. When the rats succumbed the result appeared to depend on enormous multiplication of the bacilli accompanied by very little reaction. A most interesting fact was shown by "passage experiments." By passing viruses of the second class through a series of calves a virus was obtained which gave the same reactions as that of the first class. It produced fatal progressive tuberculosis in calves and rabbits, and, moreover, its cultural characteristics were changed to those of the first class. Thus the finding of the previous reports of the commission are confirmed, and it is proved that there are viruses in the tuberculosis of man—a human and a bovinal one.

Plastic Operations on Nerves. Their Regeneration and Healing.—Spitzy and Bethe presented this subject at the last "Naturforscher Congress," the latter announcing that the field is thoroughly ploughed over now and that it is ripe for the seed of practical application. He described the theoretical foundations for the work and Spitzy related extensive practical experiences in it, after reviewing the history of the subject. His address is reproduced in full in the *Wien. klin. Wochschr.*, November 28. The results of anastomosis between various nerves show that 70 per cent. of the patients have been cured. The results were truly brilliant in some cases and in others not so good. In case of success results are obtained far more perfect than from tendon transplantation. The nature of the plastic operation depends on the kind of paralysis and the location. He makes a point of severing the nerve obliquely from the center toward the periphery, and never omits tubulization, that is, enclosing the severed stumps in a tube or sheath made from an artery taken from a dog and hardened in formalin. As the nerve substance is so exceptionally sensitive, he has devised some special instruments for the work. The blades of his forceps, for instance, end in rings. A metal electrode terminating in a needle for testing during operation, and encased in rubber for convenient handling, is a necessity. In order to bring a nerve to the desired spot through the deep soft parts, he uses a tube with a rounded cap. When the nerve is reached the cap is removed, and the nerve is drawn up into the tube by means of a thread, threaded into an ear sound. By this means the nerve can be pulled to any desired point without injury, after which the tube is withdrawn. If the nerve has to pass some point where compression is imminent, it is ensheathed in a dog's artery at this point. There is no sense in attempting an operation of the kind, he says, when the nerve that is to be used as a substitute is already affected with paralysis. Cases in which one group of muscles predominates to an extreme extent are peculiarly adapted for these operations; weakening this group helps to restore normal balance. He cites among other recent contributions to the subject Horsley's "Surgical Repair of Injured Nerves," in THE JOURNAL, March 3, 1906, page 639; also Ito's communication which was summarized in THE JOURNAL, November 30, page 1881.

The Virtue of Contentment.—A writer in the *Journal de Médecine* (Nov. 24, 1907), comments on the plethora of physicians and the decreasing remuneration for professional services. In France the number of physicians has increased from 15,000 in 1880 to more than 21,000 at the present time without any noticeable increase in the population. The author consoles his compatriots by the fact that the same is true of other countries and points to the 32,000 physicians who administer to the wants of 60,000,000 Germans, and to Spain, where there are 17,000 physicians to 17,000,000 inhabitants. The same increase is found in the rest of Europe and in the United States. But if the comfort of this comparison may exemplify the proverb "Misery loves company," the second reason for consolation has more solid ground as it concerns the comparative pecuniary rewards, and in this the American physician may find reason to be truly thankful. The author refers to the princes of German surgery, who receive as much as 500 fr. ($100) for a laparotomy, but speaks chiefly of the ordinary city physician whose visit is reckoned worth from 1 to 3 marks (25 to 75 cents). He says: "A decision rendered September 23 by a commercial court of Berlin may be instructive as to the compensation granted to Prussian physicians. Dr. L. was commissioned by the court to examine an employé dismissed on account of his health. After several examinations, followed by numerous reports, our confrère put in a claim for $3.45. The court found the bill too large and reduced it to $1.50 on the ground that the doctor had worked only three hours and that a wage of 50 cents per hour was sufficient remuneration."

Connection Between the Thyroid Gland and Diabetes.—A. Lorand affirms that the road to diabetes lies through the pancreas, but that it starts at various points. In some cases it may possibly originate in the suprarenals—the antagonism between the suprarenals and the pancreas seems to be established by Zuelzer's experimental research. He argues that there is likewise antagonism between the thyroid gland and the pancreas, and that changes in the thyroid gland may entail diabetes. It may develop in this way after emotional stress or after exophthalmic goiter, or there may be merely transient glycosuria. He thinks that diabetes should no longer be classed as a "metabolism disease;" frequently the metabolism is not materially deranged. On the other hand, pathologic conditions in one or more of the vascular glands are constantly encountered, wherefore, he declares, diabetes should be classed with exophthalmic goiter, myxedema and acromegaly. He has been treating diabetics with the serum from thyroidectomized sheep, and found that great benefit was derived in the cases in which symptoms resembling those in exophthalmic goiter were observed, especially nervous agitation and insomnia. This treatment is contraindicated when the symptoms indicate insufficient functioning of the thyroid gland. He has frequently noted that

certain families display a predisposition to both exophthalmic goiter and diabetes, one of the parents having one disease and one or more of the children presenting the other. For this reason he advises restricting the ingestion of sweets and flour foods as a prophylactic measure for the children of diabetics. Lorand's article was read at the recent German "Naturforscher Congress."

The Medical Profession and the Public in France.—The Paris blank walls have been placarded recently with a poster lauding some proprietary article, headed in flaming type, "Protect Your Skin Against Your Physician." Desfosses comments on it in the *Presse Médicale*, November 16, remarking that the poster is merely one manifestation of what seems to be a general tendency to vituperation of the medical profession. Dieulafoy remarked in the course of a recent lawsuit that the medical body is attacked on all sides, in public, in the drawing rooms, at dinner parties, on the stage and everywhere. It seems to be the fashion for great and small, and books are written and the daily papers hold forth—all railing at the medical profession. Desfosses adds that besides satire and slander of the profession we now have damage suits, many of them brought by patients who have been treated or operated on gratuitously. The physician of old was the revered priest; nowadays the public is trying to make the practice of the medical profession a trade, a business. Will it really gain by the change? Dieulafoy added: "A physician is responsible only to his conscience," to which the judge added "and to the penal code." This well expresses the tendency of the times, striving to codify the healing art. A physician can not be condemned for an error in therapeutics, Desfosses remarks in conclusion, until the day when therapeutics is codified with exact laws.

Therapeutic Value of Oil and Bone Marrow in Stomach Affections.—Walko has found oil or its equivalent extremely useful in the diet of patients with hyperacidity and hypersecretion, both the alimentary and nervous forms, and also in case of ulcer, erosions of the mucosa, acid hyperesthesia and pyloric stenosis. He found it especially beneficial in 100 cases of ulcer, supplying nutriment in a non-irritating form, reducing the excessive secretion of acid, regulating the intestinal functions and possibly affording mechanical protection to the ulcer. The latter property is probably responsible for the sudden cessation of the pain. In case of chronic gastritis with erosions he found moderate amounts of oil for three or four weeks extremely useful. An emulsion of 50 c.c. olive oil with sodium bicarbonate gave surprisingly good results in case of hyperesthesia of the stomach. In his communication on the subject in the *Wien. klin. Wochschr.*, November 21, he adds that bone marrow contains 96 per cent. fat and can be used as a substitute for the olive oil. It is especially palatable when freshly cooked and spread on bread. The addition of cooked bone marrow to the diet has given most excellent results in his experience with hundreds of cases of stomach affections, having proved exceptionally beneficial in cases of debility and of gastric ulcer on account of its high nutritive value and digestibility, besides its mechanical and other properties. He never forces the oil, when it is taken with repugnance.

Keratin in Treatment of Tabes and Hepatic Cirrhosis.—S. M. Zypkin has been applying keratin in the treatment of tabes, chronic myelitis and disseminated sclerosis with such good results that he recently applied it in a case of cirrhosis of the liver, in which it proved equally successful. The patient was a x-para with cirrhosis of the liver, edema of the legs and extreme ascites, dyspnea and cachexia. After fourteen months of the keratin treatment she was restored to comparative health; the ascitic fluid had not recurred, and the enlarged liver had grown much smaller, while normal menstruation had returned. The edema was probably due to a concomitant chronic myocarditis, on which the keratin must have had also a favorable influence as the edema did not recur after the single tapping. The keratin, 2 gm., plus 10 c.c. of a 1 per cent. solution of sodium bicarbonate, was injected subcutaneously, a syringeful every day for two months. The symptoms seemed to become aggravated at first, the girth increasing to 109 cm., but then improvement became apparent and continued to progress. In the course of the treatment the patient took by the mouth 4,800 keratin tablets, averaging from 10 to 30 a day, after the first two months during which the keratin was injected. In his communication to the *Wien. klin. Wochschr.* for June 13 Zypkin states that he is inclined to ascribe the benefit to the glutin-binding capacity of the keratin, or to some direct action on the parenchymatous elements of the nervous system, improving their nourishment.

The Ocular Reaction to Instillation of Toxins.—Netter raised a warning voice at a recent meeting of a Paris medical society against too much enthusiasm for the "ophthalmo-reaction." He said that the reaction is liable to be followed by serious consequences. He knows of several instances in which Paris ophthalmologists have been treating serious eye trouble consecutive to instillations of tuberculin. Some cases of the kind were reported at the October meeting of the Société d'Ophthalmologie. He added that typhoid patients react to instillation of typhoid, paratyphoid and colon bacillus toxins and also to tuberculin. Chauffard stated that a chronic appendicitis in a young man suggested a possible tuberculous process, but the ocular reaction was entirely negative. Operation revealed, however, an extensive tuberculous process requiring resection of the cecum. H. Truc, the professor of ophthalmology at Montpellier, found the tuberculin ocular test entirely harmless even when applied to individuals with ocular lesions. It does not aggravate them and consequently is free from danger. The reaction occurred equally pronounced in the diseased as in the sound eye. In one case in which there was a tuberculous lesion in one eye, the reaction occurred equally marked on both sides, but there was no aggravation of the lesion. He applied the test to 23 patients with various ophthalmic affections, and the four with certain or suspected tuberculosis gave a positive reaction. The reaction occurred likewise, but with less intensity in four patients who showed no clinical signs of tuberculosis; the 15 others apparently free from the disease showed no signs of a reaction.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

TUBERCULOZYNE.

———, IOWA, Dec. 21, 1907.

To the Editor:—Kindly tell me composition, etc., of "Tuberculozyne" advertised by the Yonkerman Consumption Remedy Co. of Kalamazoo, Mich., also what can be done to prevent its exploitation in this community. There is a man here (presumably intelligent, an A.M., an ordained minister, and the editor of a weekly paper) who is urging this on some people, avowing that it cured his mother-in-law ("drove the consumption from her lungs to her bowels and finally cured it"). I have patients who are considering it and who will lose time that could be better utilized in proper treatment. They desire that I get them outside information in regard to the "remedy." Will not the pure food law in some way reach this class of stuff? H. C.

ANSWER.—In discussing nostrums and fraudulent methods of exploitation in THE JOURNAL A. M. A., Nov. 10, 1906, p. 1549, Dr. Lyman F. Kebler, chief of the Drug Laboratory, Bureau of Chemistry, U. S. Department of Agriculture, commented on Tuberculozyne as follows:

"This remedy is placed on the market by a firm located at Kalamazoo, Mich. It is very interesting to note that the claims made are only for the cure of consumption. Two liquid preparations are employed, one colored amber with caramel, and another red with an aniline dye. The chief active constituents of the red medicine are alcohol and phosphatic material. Those of the amber-colored preparation are alcohol and a small quantity of an organic copper salt. It is also claimed by the firm to contain heroin. The presence of this, however, could not be established, and even if present it certainly does not possess a curative effect for consumption. A careful investigation of the remedy discloses the fact that the virtue of this medicine is claimed to reside almost solely in the small quantity of organic copper salt present. An extended investigation was entered into for the purpose of ascertaining to what extent such a copper salt was known by the medical profession to be of value in the treatment or cure of consumption, and no one appeared to be familiar with any properties inherent in organic copper salts that would be useful in the treatment or cure of consumption. It was found, however, that a considerable number of experiments had been made by a French physician in some of the

French hospitals with certain organic salts of copper, and, according to his results, such copper salts appear to have a beneficial influence in the treatment and cure of consumption, and when the case came up for final hearing this was the evidence presented by the company to show that it has a substantial basis for its remedy. Under the conditions it was difficult to assert that the remedy was not consistent with its claims. This brings out one of the most difficult features constantly being met with in dealing with these products. Medical literature teems with just such things as these, and it is not difficult to find evidence apparently of an authentic character to bolster up almost any fraudulent claim. Such is not only the case with past records, but current literature is following in similar footsteps. An interesting feature in connection with the treatment of this remedy is that the general directions prescribe the regularly recognized open-air treatment, coupled with a careful regulation of the diet. This is undoubtedly the basis of any success that may result from the use of this remedy rather than the medicine itself."

In *Collier's Weekly*, July 14, 1906, under "Quacks and Quackery," appeared the following:

"'Dr.' Yonkerman is one of those altruists who take 'a personal interest in your case.' He advertises a two-hundred-page free medical book on consumption, which will prove to the dissatisfaction of any reasonable person that he's got it. The reader is urged to fill out a symptom blank, in reply to which he gets a letter from John Adam May, M.D., 'consulting physician' and 'specialist in tuberculosis,' diagnosing that disease, and advising the use of Tuberculozyne (Yonkerman's remedy) at once. This letter, of course, is a form letter. I tested John Adam May, M.D., by sending him a list of symptoms that even a quack could hardly have regarded as possibly indicating tuberculosis, if he had considered them; but John Adam hadn't the wit to see the patent trap, and walked in by advising me that 'your symptoms indicate the presence of the poisonous toxins generated by the consumption germ.' 'Tuberculozyne' is one of those vicious morphin concoctions which dull the patient's perceptions, render him insensible of the augmented progress of the disease, and keep him the unconscious and profitable slave of the dispenser until death puts an end to the gruesome farce."

COMPOSITION OF CASTORIA.

WOBURN, MASS., Dec. 12, 1907.

To the Editor:—I will be glad to have any information you can give me in regard to Fletcher's castoria. I see it used much in my practice among children, and I wish to be able to tell parents its composition. WILLIAM H. KELEHER.

ANSWER.—Some thirty years ago one Dr. Samuel Pitcher patented a formula for the preparation of a syrup of senna with aromatics obtained by extracting senna with hot water containing a little sodium bicarbonate. This preparation was sold under the copyrighted name "castoria." Since then the patent for this preparation has expired and the preparation as well as the name "castoria," have become public property. According to the patent, the formula is as follows: To 135 pounds of senna leaves add 35 gallons of water at 65 degrees C., in which has been dissolved 48 ounces of sodium bicarbonate. Exhaust the senna by percolation until 240 pounds are obtained. In this dissolve 210 pounds of sugar and 4 ounces of Rochelle salts; then add spirit of gaultheria, 18 pints, and spirit of pepo, spirit of chenopodium (wormseed), spirit of peppermint and spirit of anise, of each 2 ounces. Castoria, therefore appears to be a syrup containing an aqueous extract of senna with aromatics. Senna preparations, prepared by extracting the drug with water containing alkalies were at one time supposed to have special value, in that certain resinous principles of senna were eliminated by this treatment. Now the resinous principles are removed by extracting the drug with alcohol and rejecting the alcoholic extraction which contains the resinous material; the drug prepared in this manner is then extracted with water. Such a preparation is official in the U. S. Pharmacopeia as Syrupus Sennæ.

BIER'S STASIS HYPEREMIA.

WICHITA FALLS, TEXAS, Dec. 23, 1907.

To the Editor:—What is the consensus of opinion among leading physicians as to the efficacy of Bier's hyperemic treatment of tuberculous joints? What is the method of treatment, supposing the knee joint to be the site of infection? J. W. DUVAL.

ANSWER.—Bier's method of treating inflammations by congestive hyperemia has the approval of the medical profession—to a considerable extent at least. The technic, as applied to such a joint as the knee, is as follows: A rubber band, or one made of elastic webbing, at least two and one-half inches wide, is applied around the leg above the lesion. The bandage should be tight enough to make the skin red, but should not interrupt the arterial circulation. It should not cause pain. It should be worn an hour or two once or twice a day. If the skin becomes tender, the position of the bandage should be changed. Other bandages should be removed and discharging fistulas should be covered up. The limbs should not be immobilized. Considerable time is required for the cure, nine months or longer. For further information see Bier's book or consult the following articles:

C. Deutschlander: *Munch med. Wochschr.*, liv, No. 16. v. Schmiedeberg: *Medical Record*, Aug. 17, 1907, abst. in THE JOURNAL, Aug. 31, 1907, p. 802. Willy Meyer: THE JOURNAL, Aug. 17, 1907.

DISEASES OF TWINS.

Mr. J. Lionel Tayler, 8 Adys Lawn, Willesden Green, London, N.-W., England, requests that any of our readers, who have in their possession evidence on the points mentioned below, communicate with him. He says: Twins, if they are true twins, are usually of the same sex, and are most frequently either much alike or much unlike.

Of like twins of the same sex at any age period, have you any medical experience of their suffering simultaneously or independently from like or unlike diseases in like or unlike- (separate) surroundings?

2. Of unlike twins of the same sex at any age period, have you any medical experience of their suffering simultaneously or independently from like or unlike diseases in like or unlike (separate) surroundings?

Please name specifically all diseases referred to, as this point is very important. Any additional information on the subject would be welcomed, and all remarks will, of course, be treated confidentially.

ANTIKAMNIA AND ACETANILID.

GRAND RAPIDS, MICH., Dec. 21, 1907.

To the Editor:—I have just received an advertisement of antikamnia which states that it is guaranteed under the Food and Drugs Act not to contain acetanilid. I have always supposed acetanilid to be the chief ingredient of antikamnia, and I am inclined to think that the Council on Pharmacy and Chemistry has made such a statement. Am I right? Or have they changed the formula? E. A. ROBERTSON.

ANSWER.—Antikamnia, as shown by the Council on Pharmacy and Chemistry, contained a little less than 70 per cent. of acetanilid. This, however, was before the national Food and Drugs Act went into effect. Since then phenacetin (acetphenetidin) has been substituted for acetanilid. (THE JOURNAL, Jan. 26, 1907, p. 340.) However, in England antikamnia still contains acetanilid; it is the same as that which was sold in this country previous to last January.

TUBERCULOSIS CONGRESSES AND LITERATURE.

CARRINGTON, N. D., Dec. 13, 1907.

To the Editor:—(1) Where can I get the transactions of the last International Tuberculosis Congress; (2) where the transactions of the national society; (3) where the best history of tuberculosis from the earliest times to the present day, and (4) where find the best information on this subject to-day? EDWIN L. GOSS.

ANSWER.—1. The transactions of the last International Tuberculosis Congress were published in 1906, in three large volumes, by Masson et Cie, Paris, from whom they are obtainable. An order may be sent through a United States dealer in foreign books.

2. The transactions of the National Association for the Study of Tuberculosis can be had only from a member, or in special cases by application to the secretary, Dr. Livingston Farrand, 105 East 22d Street, New York City, or through some director of the association.

3. The best historical treatises on tuberculosis are: Predöhl: "Geschichte der Tuberculose"; Waldenburg: "Tuberkulose," and in Newburger and Pagel: "Geschichte der Medizin."

4. The most extensive information on the subject can be found in the English translation of Cornet's text-book on tuberculosis, edition of 1899. More recent in English are the articles on tuberculosis by Baldwin and Brown in Osler's "Modern Medicine," vol. iii, 1907, which give a good outline of the history of tuberculosis.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending, Dec. 28, 1907:

Cole, C. LeR., asst.-surgeon, now at Lawrence, Kans., en route to Fort Thomas, Ky., will proceed to Jefferson Barracks, Mo., for temporary duty at that post, and on the completion thereof will proceed to Fort Thomas, Ky., as heretofore ordered.

Snyder, C. R., asst.-surgeon, granted five days' leave of absence.

Davis, W. T., asst.-surgeon, granted 30 days' leave of absence.

Baker, C. L., contract surgeon, left Fort Warren, Mass., on leave of absence for one month.

Brewer, I. W., contract surgeon, arrived at Fort Warren, Mass., for duty.

Hereford, J. R., contract surgeon, returned to duty at Fort Dade, Fla., from leave of absence for one month.

Kleruff, H. N., contract surgeon, granted an extension of one month, fifteen days for his leave of absence.

Shepherd, J. M., contract surgeon, relieved from duty at Fort Apache, Ariz., and ordered to Fort Douglas, Utah, for duty.

McCown, T. B., contract surgeon, relieved from duty at Fort Mott, N. J., and ordered to Fort Douglas, Utah, for duty.

Suggs, Frank, contract surgeon, granted leave of absence for one month.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending Dec. 28, 1907:

Thompson, J. C., surgeon, detached from the *Chattanooga*, and ordered to Washington, D. C., and report to the Secretary of the Navy.

Hoyt, R. E., P. A. surgeon, detached from the Naval Hospital, Canacao, P. I., and ordered to the *Chattanooga*.

DeLancy, C. H., P. A. surgeon, orders of December 18 revoked; ordered to continue duty at the Naval Recruiting Station, Chattanooga, Tenn.

Zalesky, W. J., P. A. surgeon, detached from the Naval Recruiting Station, Chattanooga, Tenn., and ordered to the Naval Recruiting Station, New Orleans.

Brooks, F. H., asst.-surgeon, detached from the *Adams*, when placed out of commission, and ordered to the *Montgomery*.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Dec. 25, 1907:

Rosenau, M. J., surgeon, granted leave of absence for six days from Dec. 26, 1907, under Paragraph 189, Service Regulations.

Oakley, J. H., P. A. surgeon, reassigned to duty at Fort Townsend Quarantine Station, Washington, effective May 28, 1907.

Parker, H. B., P. A. surgeon, reassigned to duty at Ellis Island, New York, effective Dec. 7, 1907.

Wille, C. W., P. A. surgeon, granted leave of absence for 1 month and 22 days from Dec. 22, 1907.

Earle, B. K., P. A. surgeon, granted leave of absence for 10 days from Dec. 24, 1907.

Lloyd, B. J., P. A. surgeon, granted leave of absence for four days from Nov. 22, 1907.

Bailey, C. W., acting asst.-surgeon, granted leave of absence for 7 days from Nov. 21, 1907, on account of sickness.

Cleaves, F. H., acting asst.-surgeon, granted leave of absence for 5 days from Sept. 23, 1907, under Paragraph 210, Service Regulations.

Nute, A. J., acting asst.-surgeon, granted leave of absence for 10 days from Dec. 21, 1907.

Stearns, H. H., acting asst.-surgeon, granted leave of absence for 9 days from Dec. 7, 1907, on account of sickness.

Thompson, W. R. P., acting asst.-surgeon, granted leave of absence for 21 days from Dec. 11, 1907.

PROMOTIONS.

P. A. Surgeons B. W. Brown, M. J. Rosenau, and J. M. Eager commissioned as surgeons, to rank as such from Nov. 9, 1907.

Foster, A. D., asst.-surgeon, commissioned as P. A. surgeon, to rank as such from Nov. 28, 1907.

Robertson, H. McC., asst.-surgeon, commissioned as P. A. surgeon, to rank as such from Nov. 26, 1907.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Dec. 27, 1907:

SMALLPOX—UNITED STATES.

California: Los Angeles, Dec. 1-14, 24 cases; San Francisco, 16 cases, 1 death.
Illinois: Chicago, Dec. 6-14, 2 cases; Springfield, Dec. 6-12, 14 cases.
Indiana: Seven counties, Oct. 1-31, 75 cases; Elkhart, Dec. 8-21, 4 cases; Lafayette, Dec. 10-16, 1 case.
Georgia: Augusta, Nov. 27-Dec. 3, 1 case.
Kansas: Kansas City, Dec. 8-14, 1 case; Topeka, Dec. 11-17, 1 case.
Kentucky: Lexington, Nov. 24-30, 1 case.
Massachusetts: Everett, Dec. 8-14, 2 cases; Fall River, Dec. 8-14, 1 case; Waltham, Dec. 15-21, 1 case.
Michigan: Saginaw, Dec. 1-14, 9 cases.
Minnesota: Winona, Dec. 8-14, 1 case.
Missouri: St. Louis, Dec. 8-14, 1 case.
New York: New York, Dec. 8-14, 4 cases, 1 death.
Ohio: Dayton, Dec. 8-14, 5 cases.
Pennsylvania: Harrisburg, Dec. 17, 1 case (imported). Note: Dec. 6, 2 cases were erroneously reported at Altoona.
South Dakota: Vermillion, Oct. 1-Dec. 13, 30 cases.
Tennessee: Nashville, Dec. 8-14, 12 cases.
Texas: San Antonio, Dec. 8-14, 1 case.
Washington: Port Townsend, Dec. 7, 1 case (from S. S. *Alaskan*); Spokane, Dec. 8-14, 9 cases; Tacoma, 2 cases.
Wisconsin: La Crosse, Dec. 8-14, 2 cases.

SMALLPOX—FOREIGN.

Africa: Lorenzo Marquez, Oct. 1-31, 2 deaths.
Belgium: Ghent, Nov. 17-23, 2 deaths.
Brazil: Rio de Janeiro, Nov. 4-17, 25 cases, 9 deaths.
Canada: New Brunswick—Milltown, Dec. 14, 1 case.
Chile: Iquique, to Nov. 30, still present.
China: Amoy and Kulangsu, to Nov. 9, present; Shanghai, Nov. 4-17, 20 deaths, native population.
Ecuador: Guayaquil, Nov. 24-30, 4 deaths.
France: Marseilles, Nov. 1-30, 27 deaths; Paris, Nov. 24-30, 2 cases
Great Britain: Bristol, Dec. 1-7, 1 case; Liverpool, 1 case.
India: Bombay, Nov. 13-26, 4 deaths; Calcutta, Oct. 22-Nov. 2, 4 deaths; Madras, Nov. 16-22, 2 deaths.
Italy: General, Sept. 30-Dec. 5, 30 cases; Genoa, Oct. 1-31, 1 case.
Japan: Kobe, Nov. 10-16, 7 cases.
Mexico: Aguas Calientes, Nov. 24-30, 5 deaths; Monterey, Dec. 2-8, 1 death.
Peru: Lima: Nov. 23, still present.
Portugal: Lisbon, Nov. 24-30, 1 case.
Russia: Moscow: Nov. 17-23, 4 cases, 1 death; Riga, Nov. 24-30, 4 cases; St. Petersburg, Nov. 9-30, 3 cases.
Spain: Valencia, Nov. 25-Dec. 1, 32 cases, 2 deaths.
Turkey in Asia: Bagdad, Oct. 26-Nov. 2, 79 cases, 19 deaths.
Venezuela: Caracas, Nov. 22-Dec. 8, 800 cases, estimated 83 in hospital.

CHOLERA.

Hawaii: Honolulu, Dec. 19-21, 1 case, 1 death.
India: Bombay, Nov. 13-28, 8 deaths; Calcutta, Nov. 2-16, 267 deaths; Cochin, Oct. 5-25, 30 deaths; Madras, Nov. 9-22, 11 deaths; Nagapatam, Oct. 1-30, 28 deaths.
Japan: General, Aug. 4-Nov. 27, 3,049 cases, 1, 873 deaths; Kobe, Nov. 10-16, 4 cases, 1 death, from outbreak to Nov. 16, 472 cases, 332 deaths; Shinagawa, Nov. 23, present, on two torpedo-boat destroyers; Nagasaki ken, Nov. 11-17, 1 case, 1 death; Saseho, Nov. 20, still present; Yokohama, Nov. 19-25, 7 cases, 4 deaths.
Philippine Islands: Bocaue, Nov. 2, present; Calumpit, present; Manila, Oct. 27-Nov. 9, 18 cases, 18 deaths.
Russia: General, July 3-Nov. 6, 11,472 cases, 5,493 deaths.
Turkey in Asia: Sinope, Oct. 27-Nov. 5, 68 cases, 51 deaths (from S. S. *Gregory Merck*).

YELLOW FEVER.

Brazil: Rio de Janeiro, Nov. 4-17, 2 cases.

PLAGUE—UNITED STATES.

California: San Francisco, Dec. 18-23, bacteriologically examined 3 cases and 1 death.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Nov. 4-17, 12 cases, 1 death.
China: Amoy and Kulangsu, to Nov. 9, still present; Tchengchow-fu, to Nov. 15, 100 deaths, estimated.
Egypt: Alexandria, Nov. 21-27, 13 cases, 7 deaths; Port Said, 3 cases, 2 deaths; Provinces: Assiout, Nov. 26-Dec. 2, 8 cases, 8 deaths; Dakahieh, Nov. 27-Dec. 3, 43 cases, 24 deaths; Minieh, Nov. 9-15, 1 case, 1 death.
India: General, Oct. 27-Nov. 9, 17,766 cases, 13,210 deaths: Bombay, Nov. 13-26, 26 deaths; Calcutta, Oct. 28-Nov. 16, 46 deaths.
Japan: Nagasaki ken: Taira Mura, Goto Island, to Nov. 9, 22 cases, 11 deaths; Osaka, Nov. 16-27, 51 cases, 47 deaths, present to Nov. 27.
Peru: Caleta Coloso, Nov. 2-16, 3 cases, 1 death; Lima, Nov. 14-20, 1 case, 1 death; Ferrenhafe, 1 case: Paita, 7 cases, 7 deaths; Tacha, Nov. 7-21, 2 cases, 1 deaths; Trujillo, 16 cases, 8 deaths.

Marriages

JESSE D. MARS, M.D., to Miss Estelle Otis, both of Florida, N. Y., December 10.

JOHN C. AUGUSTINE, M.D., to Mrs. Emma Meredith, both of Batavia, Ill., December 23.

HUGH S. WILLSON, M.D., to Miss Mary Richmond, both of Crystal, N. D., August 28.

FRANK DORSEY, M.D., Cleveland, Ohio, to Miss Maud B. Sargent, of Malden, Mass., December 18.

GEORGE H. GREEN, M.D., Reardan, Wash., to Miss Anna Haven Guth, of Valparaiso, Ind., November 27.

WILLIAM HAMLIN WILDER, M.D., to Miss Caroline Louise Rothschild, both of Chicago, December 25.

CASSIUS L. HERREN, M.D., Liberty, Ky., to Miss Dora Beck, of Cumberland County, Ky., December 15.

SAMUEL T. REVELL, M.D., Louisville, Ga., to Miss Lettie Terry Jones, at Roanoke, Va., December 18.

CRITTENDEN JOYES, M.D., Fort Worth, Texas, to Miss Almeda Griggs, of Waxahachie, Texas, November 19.

HUBLEY R. OWEN, M.D., Philadelphia, to Miss Maud Smith, of Tioga, Pa., in June, 1906, in Haverhill, Mass.

ORA BERTON DUNHAM, M.D., Goldfield, Nev., to Miss Georgia Savage, of Salt Lake City, Utah, November 4.

SAMUEL GILMORE LOGAN, M.D., Tyler, Pa., to Miss Ruby May Almy, of Brockwayville, Pa., December 12.

HUPP H. MCINTYRE, M.D., New Martinsville, W. Va., to Miss Grace M. Grimes, of Weston, W. Va., January 1.

MONTIE L. REA, M.D., Charlottesville, Va., to Miss Pearl Watson, both of Charlottesville, Va., December 18.

GEORGE HERBERT WILLIAMS, M.D., Fishkill-on-the-Hudson, to Miss Sarah Livingston, of New York City, December 14.

WILLIAM H. CHAPMAN, M.D., Nebraska State Hospital, Ingleside, to Mrs. Florence D. Sims of the same institution, December 21.

LAVINIA FRASER MCPHEE, M.D., Independence, Iowa, and Mr. Alexander Edgar Green, of Winnipeg, Man., at Cedar Rapids, Iowa, December 19.

Deaths

Henry Patterson Loomis, M.D. New York University Medical College, 1883; a member of the medical societies of the State and County of New York; president of the New York Pathological Society and New York Academy of Medicine; visiting physician to the New York Hospital and Bellevue Hospital; consulting physician of the Board of Health of New York City; professor of materia medica, therapeutics and clinical medicine in Cornell University Medical College, New York City; a noted specialist on diseases of the heart and lungs; died at his home in New York City, December 22, from pneumonia, after an illness of five days, aged 48.

William Bayard, M.D. University of Edinburgh, Scotland, 1837; in 1895 president of the Canadian Medical Association; founder of the St. John General Public Hospital, chairman of the New Brunswick Medical Society and president of the Council of Physicians and Surgeons; coroner of St. John County for several years, and chairman of the Provincial Board of Health; said to have been the oldest graduate of the University of Edinburgh, who was given the honorary degree of LL.D. by that institution in 1907; died at his home in St. John, N. B., December 17, aged 94.

Hubbard Madison Smith, M.D. Starling Medical College, Columbus, Ohio, 1849; president of the board of trustees of the University of Vincennes, Ind.; postmaster of that city from 1861 to 1869; a member of the pension examining board for twelve years thereafter; a member of the Indiana State Medical Association and Knox County Medical Society; died at his home in Vincennes, December 23, as the result of a fall several days before, aged 87.

Charles Howell Bailey, M.D. College of Physicians and Surgeons in the City of New York, 1869; a member of the American Medical Association; a veteran of the Civil War; for several years president of the Board of Health of Bloomfield, N. J., and up to 1905 a member and president of the medical and surgical staff of the Mountainside Hospital, Montclair; died at his home in Bloomfield, December 18, from paralysis, aged 62.

George James Holmes, M.D. Albany (N. Y.) Medical College, 1882; a member of the American Medical Association; an ophthalmic and aural surgeon of New Britain, Conn.; sometime president of the New Britain Medical Society, and in charge of the eye and ear departments of the New Britain General Hospital; died at that institution, December 14, from pneumonia, after an illness of three days, aged 53.

George H. Briggs, M.D. University of Buffalo (N. Y.), Medical Department, 1852; surgeon of the Eighteenth Wisconsin Volunteer Infantry during the Civil War; from 1857 to 1859 superintendent of schools of Delavan, Wis., and for nine years physician to the Wisconsin Institute for the Deaf and Dumb; died at the home of his daughter, in Albert Lea, Minn., December 12, from heart disease, aged 80.

James W. Casey, M.D. University of Buffalo (N. Y.) Medical Department, 1862; a member of the medical societies of the State of New York and County of Monroe; a surgeon in the Federal service during the Civil War; president of the medical staff of St. Mary's Hospital, Rochester; died at his home in that city, November 18, from cirrhosis of the liver, after an illness of one year, aged 73.

Adolph Grimm, M.D. Medical College of Ohio, Medical Department, University of Cincinnati, 1881; a member of the American Medical Association; for 23 years a member of the staff of St. Mary's Hospital, Cincinnati, and for the past fifteen years secretary of the staff; died in the German Deaconess Hospital, in that city, December 15, from tubercular peritonitis, complicating diabetes, aged 48.

James Madison Brannock, M.D. Jefferson Medical College, Philadelphia, 1851; surgeon in Bragg's Brigade, Cheatham's Division, in the Confederate service, during the Civil War; superintendent of the West Tennessee Hospital for the Insane; and since 1889 a resident of Richmond, Va.; died at the home of his daughter in that city, December 14, from senile debility, aged 78.

Mathew Oliver Jones, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1850; a member of the American Medical Association, and probably the oldest practitioner of Allegheny County, Pa.; for many years consulting physician to the Passavant Hospital, Pittsburg; died at his home in Allegheny, December 21, from senile debility, aged 85.

Nathan Avery Caldwell, M.D. Albany (N. Y.) Medical College, 1881; at one time health officer of the towns of Amsterdam and Hagaman, N. Y., and member of the consulting staff of the Faxon Hospital, Utica, N. Y., died at his home in Hagaman, December 20, while under anesthesia, preparatory to an operation for a disease of the bones of the leg, aged 51.

Louis F. Weaver, M.D. Jefferson Medical College, Philadelphia, 1875; in 1894 a member of the common council of Syracuse, N. Y.; twice coroner of Onondaga County, and 1894 a trustee of the Syracuse State Institution for Feeble-Minded Children; died at his home in Syracuse, December 18, after an illness of five years, aged 58.

Jefferson Ward Merrill, M.D. Medical Faculty of Queen's University, Kingston, Ont., 1902; assistant in Rockwood Asylum, and afterward house surgeon in Water Street Hospital, Ottawa, and later surgeon of the Canadian Pacific Railway at Chapleau, Ont., died in Ottawa, September 4, from cerebrospinal meningitis, aged 30.

Frank Farquhar Ferguson, M.D. Long Island College Hospital, Brooklyn, N. Y., 1880; a member of the American Medical Association, and for several years pathologist to the New York Hospital; a clinical diagnostician of unusual ability; died at Atlantic City, N. J., December 14, after an illness of two months, aged 60.

John Stuard Robertson, M.D. Medical College of Ohio, Medical Department, University of Cincinnati, 1883; a veteran of the Civil War; at one time clerk of the Supreme and Circuit courts; house physician of Niles Sanitarium, Urbana, Ohio; died in that institution, December 22, aged 63.

Henry Case Spooner, M.D. Western Reserve University Medical College, Cleveland, 1859; surgeon of the Fifty-fifth Ohio Volunteer Infantry during the Civil War, and formerly a member of the legislature; died at his home in Republic, Ohio, from heart diseease, December 19, aged 70.

John C. Johnson, M.D. College of Physicians and Surgeons in the City of New York, 1850; a member of the medical societies of New Jersey and Warren County; and once president of the state society; died at his home in Blairstown, December 23, from senile debility, aged 78.

Thomas P. Gary, M.D. Medical College of the State of South Carolina, Charleston, 1857; a Confederate veteran; for many years a practitioner of Selma, Ala.; died at the home of his sister, at Gadsden, Ala., December 17, from uremia, after a short illness, aged 78.

William O. C. Harding, M.D. Eclectic Medical Institute, Cincinnati, 1891; local surgeon to the Panhandle System; died at his home in Elmwood Place, Cincinnati, December 17, from peritonitis, due to injuries received in a runaway accident five days before, aged 38.

Robert Newton Strong Barger, M.D. Rush Medical College, Chicago, 1868; a veteran of the Civil War; during which he served as hospital steward; died at his home in Hopedale, Ill., December 19, from cerebral hemorrhage, after an illness of three years, aged 65.

Joseph A. Biegler, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1867; surgeon in the Federal service during the Civil War; and sometime a member of the Board of Health of Rochester, N. Y., died at his home in that city, December 22.

Joseph Everett Garland, M. D. Medical School of Harvard University, Boston, 1877; a member of the American Medical Association; and for twenty-three years a member of the School Board of Gloucester, Mass., died recently, and was buried December 20.

William Austin Walker, M.D. Jefferson Medical College, Philadelphia, 1854; a member of the Medical Association of the State of Alabama and Bullock County Medical Society; died recently at his home, in Perote, Ala., and was buried, December 12, aged 75.

Hal R. Cohee, M.D. Medical Department of the Creighton University, Omaha, 1906; a member of the Missouri Valley Medical Society; died at his home in Wood Lake, Neb., December 9, from typhoid fever, after an illness of twenty-two days, aged 35.

Julia Wallace-Russell, M.D. Woman's Medical College of the New York Infirmary, New York City, 1877; of Concord, N. H.; physician in charge of the New Hampshire Hospital for Women and Children, Concord, since its foundation; died July 1, aged 63.

William Alexander Waters, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1852; formerly a practitioner of Clarkesburg, Md., died suddenly from heart disease, December 19, while visiting one of his tenants, near Boyds, aged 83.

George W. Wilson, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1870; a member of the

Iowa State and Poweshiek County medical societies; died at his home in Montezuma, from nephritis, December 16, aged 58.

James Harris Blake, M.D. University of Maryland School of Medicine, Baltimore, 1873; for 37 years a practitioner of Houston, Texas; died at his home in that city, December 16, from cerebral hemorrhage, after an illness of nine months, aged 60.

James M. Safford, M.D. University of Nashville, Medical Department, 1872; formerly professor of chemistry in that institution and Vanderbilt University; a distinguished chemist, geologist and educator; died in Dallas, Texas, July 2, aged 86.

Albert Cory, M.D. Rush Medical College, 1882; formerly physician to the Vernon County (Wis.) Asylum for the Insane and local surgeon of the Chicago, Milwaukee and St. Paul Railway, at Viroqua; died recently at his home in Chicago, aged 52.

Elmer Ellsworth Goodwin, M.D. Dartmouth Medical School, Hanover, N. H., 1896 a member of the Massachusetts and Essex District medical societies; died at his home in Haverhill, Mass., December 18, after an illness of five weeks, aged 42.

Charles Nathaniel Thayer (registration, Mass., 1894); a veteran of the Civil War, and twice a member of the legislature; died at his home in Fairhaven, Mass., November 12, from angina pectoris, after an illness of twenty days, aged 80.

Frederick Elliott Gordon, M.D. Medical College of Alabama, Mobile, 1882; a member of the American Medical Association; died at his home in Anniston, Ala., December 15, from heart disease, after an illness of several weeks, aged 46.

Theodore T. Haering, M.D. University of Munich, Germany, 1860; surgeon of the Ninth Wisconsin Volunteer Infantry, during the Civil War; died at his home in Bloomington, Ill., December 20, after an illness of one week, aged 74.

Edgar F. Northway, M.D. Hahnemann Medical College and Hospital of Chicago, 1903; formerly of Kenosha, Wis.; died at his home in Lordsburg, N. M., December 13, from tuberculosis, after an illness of two years, aged 35.

J. B. Honeycutt, M.D. Hospital College of Medicine, Louisville, 1891; a member of the Kentucky State and Barren County medical societies; died at his home in Glasgow, from cancer, December 17, aged 50.

Nathan Luther French, M.D. Tennessee Medical College, Knoxville, 1894; of Wartburg, Tenn.; a member of the American Medical Association; died at Harriman, Tenn., December 9, from typhoid fever, aged 40.

C. W. Meely (years of practice, Ohio, 1896), formerly of Wapakoneta, Ohio; an inmate of the Soldiers' Home, Dayton; died in the Miami Valley Hospital, Dayton, December 18, after a long illness, aged 86.

William Eves, M.D. Jefferson Medical College, Philadelphia, 1868; formerly of Williamsport, Pa.; a member of the pension examining board; died at his home in Hershey, Neb., December 18, aged 66.

Elige M. Koger, M.D. University of Tennessee, Medical Department, Nashville, 1904; a member of the American Medical Association; died at his home in Albany, Ky., September 8, aged 31.

Edward F. Butterfield, M.D. Metropolitan Medical College, New York City, 1861; formerly of Syracuse, N. Y., died at his home in Manlius, N. Y., from senile debility, December 17, aged 81.

Robert W. McClelland, M.D. University of Virginia, Department of Medicine, Charlottesville, 1862; died suddenly at his home in Arrow Rock, Mo., December 12, from angina pectoris, aged 72.

William Alexander Conkey, M.D. University of Louisville (Ky.) Medical Department, 1838; died at his home in Homer, Ill., December 2, from pneumonia, after an illness of two weeks, aged 86.

Edward P. Doherty, M.D. University of Buffalo (N. Y.) Medical Department, 1884; for six years surgeon of the Maritime Penitentiary, Dorchester, N. B., died, October 3, aged 46.

David S. Clark, M.D. Vermont Academy of Medicine, Castleton Medical College, 1854; a surgeon in the Civil War; died at his home in West Derry, N. H., December 20, aged 83.

M. C. Cox, M.D. Medical College of Georgia, Augusta, 1856; a Confederate veteran; died at his home at Lanford, S. C., December 18, after an illness of thirteen months, aged 72.

Everett H. Coleman (license, 1854), for many years a practitioner of Belleville, Ont.; died at his home in that place, November 1, from cerebral hemorrhage, aged 74.

H. L. Tooley, M.D. Medical Department of St. Louis University, 1907; of Purcell, Okla., died in Denver, Colo., November 27, from tubercular peritonitis, aged 24.

Frederick A. Noble, M.D. Philadelphia University of Medicine and Surgery, 1867; of Seattle, Wash.; died at his old home in Aurora, Neb., July 24, aged 65.

Deaths Abroad.

Oscar E. Lassar, M.D., professor of dermatology at Berlin, and founder of a popular private clinic for skin diseases, was fatally injured in an automobile accident, dying December 23, aged 58. He organized the Berlin Dermatologic Society and took a leading part in public hygienic measures, especially the introduction of baths for the poor. He was also a frequent contributor to scientific periodicals, besides the *Dermatologische Zeitschrift*, which he founded about fourteen years ago. For some years he served with Koch on the national board of health.

H. Folet, M.D., professor of surgery at Lille, France, died November 3, aged 64. He was president of the Northern Medical Society, and had published works on transplantations in men and animals, traumatic encephalocele, splenectomy, etc.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

UTAH State Board of Medical Examiners, Salt Lake City, January 6. Secretary, Dr. R. W. Fisher, Salt Lake City.

ARIZONA Board of Medical Examiners, Phoenix, January 6-7. Secretary, Dr. Ancil Martin, Phoenix.

COLORADO State Board of Medical Examiners, Denver, January 7. Secretary, Dr. S. D. Van Meter, 1723 Tremont St., Denver.

WASHINGTON State Medical Examining Board, Spokane, January 7. Secretary, Dr. C. W. Sharples, Seattle.

OREGON Board of Medical Examiners, Portland, January 7-9. Secretary, Dr. Byron E. Miller, The Dekum Building, Portland.

NORTH DAKOTA State Medical Examining Board, Grand Forks, January 7-9. Secretary, Dr. H. M. Wheeler, Grand Forks.

SOUTH DAKOTA State Board of Medical Examiners, Mitchell, January 8-9. Secretary, Dr. H. E. McNutt, Aberdeen.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, January 9-13. Secretary, Dr. George C. Ober, Washington.

NEW MEXICO Board of Health and Medical Examiners, Santa Fe, January 13. Secretary, Dr. J. A. Massie, Santa Fe.

ARKANSAS Homeopathic Board of Medical Examiners, Little Rock, January 14. Secretary, Dr. V. H. Hallman, Hot Springs.

ARKANSAS Eclectic Board of Medical Examiners, Little Rock, January 14. Secretary, Dr. A. J. Widener, Little Rock.

NEW HAMPSHIRE State Board of Medical Examiners, Concord, January 14-15. Regent, Mr. H. C. Morrison, Concord.

VERMONT State Board of Medical Registration, State House, Montpelier, January 14-16. Secretary, Dr. W. Scott Nay, Underhill.

WISCONSIN Board of Medical Examiners, Plankinton Hotel, Milwaukee, January 14-16. Secretary, Dr. J. V. Stevens, Jefferson.

Arkansas October Report.—Dr. F. T. Murphy, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Oct. 9, 1907. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 19, of whom 9 passed, including 2 non-graduates, and 10 failed, including 7 non-graduates. Four old practitioners, including one non-graduate, were granted licenses by reason of having been registered under the old law. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
College of P. and S., Kansas City*	(1901)	78
University of Maryland	(1879)	84
Barnes Med. Coll.	(1899) 84; (1907)	77, 84
St. Louis Coll. of P. and S.	(1906)	79
University of Virginia	(1905)	87
FAILED.		
Cincinnati Coll. of Med. and Surg.	(1900)	38.1
Meharry Med. Coll.	(1906) 51; (1907)	73
REGISTERED UNDER OLD LAW.		
National Med. Coll., Washington, D. C.	(1902)	
Baltimore Med. Coll.	(1891)	
Arkansas University	(1896)	

* In 1905 this school was absorbed by the University of Kansas School of Medicine.

Indiana October Report.—Dr. W. T. Gott, secretary of the Indiana State Board of Medical Registration and Examination, reports the written examination held at Indianapolis, Oct. 22-24, 1907. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 63, of whom 55 passed and 8 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Rush Med. Coll.	(1903) 84.3; (1905)	91.7
Chicago Coll. of Med. and Surg.	(1906) 91.5; (1907)	83.2
Illinois Med. Coll.	(1906) 82.4; (1907)	86.7, 87.2
College of P. and S., Chicago	(1905) 90.4; (1907)	87.4, 88.8, 89.3
Hahnemann Med. Coll., Chicago	(1901) 89; (1906) 88.7; (1907)	86.5.
Northwestern Univ. Med. School	(1901) 91.1; (1907)	83, 93
Bennett Coll. of Ecl. Med. and Surg.	(1889)	86.3
Eclectic Med. Coll. of Indiana	(1907)	87.7, 89.2
State Coll. of P. and S., Indianapolis	(1907)	86.5
University of Michigan	(1904) 91.6; (1907)	93.3
University of Michigan, Homeopathic Department	(1907)	81.2
Kentucky School of Med., (1883) 75.1; (1901) 75.1; (1907)		81.3, 82, 83.8, 83.8, 86.4, 87.1, 87.3, 87.4, 89.4, 89.9.
Hospital Coll. of Med., Louisville	(1906) 81.3; (1907)	85.3, 83.8
University of Louisville	(1893) 82.8; (1907)	81, 81.9, 84.1, 89.9, 91.6, 92.8.
Indiana Med. Coll.	(1907)	75, 89.7
Louisville Med. Coll.	(1907)	79.3
Medical Coll. of Ohio	(1906) 91; (1907)	87.5
Meharry Med. Coll.	(1907)	82.4
University of Pennsylvania	(1907)	92.5
University of Virginia	(1906)	91.9
University of Naples, Italy	(1882)*	

FAILED.

Bennett Coll. of Ecl. Med. and Surg.	(1907)	73
College of P. and S., Chicago	(1906)	69.8
Jenner Med. Coll.	(1907)	69.5
Indiana Med. Coll.	(1906) 62.5; (1907)	71.5
Kentucky School of Med.	(1907)	61.9
Louisville Med. Coll.	(1891)	56.5
University of Louisville	(1902)	71

* Percentage not given.

Michigan Reciprocity Report.—Dr. B. D. Harison, secretary of the Michigan State Board of Registration in Medicine, sends us the following list of reciprocal licenses isued by the board from Aug. 1 to Dec. 14, 1907, inclusive:

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
Northwestern Univ. Med. School	(3, 1907)	Illinois
Rush Med. Coll.	(1902) Indiana; (1907)	Illinois
Woman's Med. School of Northwestern Univ.	(1900)	Kansas
Bennett Coll. of Ecl. Med. and Surg.	(1906)	Illinois
College of P. and S., Chicago	(2, 1905); (1907)	Illinois
College of Med. and Surg., Chicago	(1907)	Illinois
Hahnemann Med. Coll., Chicago	(1895)	Illinois
Medical Coll. of Indiana	(1904)	Indiana
Baltimore Med. Coll.	(1907)	Maryland
University of Michigan	(1884) California; (1875)	Ohio
St. Louis Coll. of P. and S.	(1900)	Missouri
Cleveland Homeo. Med. Coll.	(1905)	Ohio
Jefferson Med. Coll.	(1906)	Vermont
University of Pennsylvania	(1902)	Penna.
Milwaukee Med. Coll.	(1904)	Wisconsin

Representatives from the following colleges were licensed under the exemption clause:

Univ. of Michigan, Dept. of Med. and Surg.	(2, 1906); (1907)
University of Michigan, Homeopathic Department	(1904)

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

State Journals Should Devote More Space to Medical Economics.

In the December *Ohio State Medical Journal*, a leading editorial on "Medical Economics" is evidence of the increasing interest taken in questions affecting the practical side of medicine. An abstract of the editorial follows:

One of the prominent features of the new organization of the medical profession has been the great increase in interest in medical economics. This is shown not only by the resolutions passed and discussions indulged in by various medical societies, but also by the increasing number of articles devoted to this subject which are appearing in the medical press. While the scientific work of the profession is its chief aim, yet physicians are realizing that the possession of scientific knowledge imposes certain duties and responsibilities which demand their serious attention. There are a large number of subjects which are plainly auxiliary to scientific medicine.

The different departments of our civil government devote 40 per cent. of the revenues to maintaining means of offense and defense for the protection of its citizens. What is the medical profession doing along these lines? As evidence of the necessity and importance of the medical profession paying attention to these matters, are instanced the attitude of one of the United States senators from Ohio on public health measures, the attitude of "patent-medicine" interests and their efforts to influence the public, as well as the desirability of the medical profession itself rigidly maintaining its own ethical standard.

Officers of county and district societies and members of state and auxiliary committees on public policy and legislation are urged to take an active interest in their work. The state journal should devote more space and attention to medical economics and should establish a department for such subjects, as the value of this work seems incalculable.

Illegal Practitioners Cast Out of Missouri.

In the December *Journal of the Missouri State Medical Association* appears a report regarding the efforts of the State Board of Health and the medical profession of Missouri to revoke the licenses of various violators of the medical practice act. Besides Drs. Bye and Johnson of Kansas City, the revocation of whose licenses has been previously noted, the State Board of Health has revoked the licenses of Dennis R. Dupuis, alias Rupert Wells, and S. R. Chamlee, both of St. Louis. The evidence in these cases was collected by Health Commissioner Bond, through the various departments of the St. Louis Health Department, and was presented to the board by him with the assistance of the attorney of the St. Louis Medical Society, Mr. I. V. Barth. A number of other cases are now pending before the state board and will probably be disposed of at the next meeting. County societies in other parts of the state are taking up the work of investigating and prosecuting illegal practitioners in their districts.

The *Journal* also publishes a list of persons and institutions located in St. Louis affected by an order of the Postoffice Department, denying them the use of United States mails. Newspapers carrying advertisements of any of these individuals or institutions have also been declared unmailable. This list was given in THE JOURNAL, Nov. 23, 1907, page 1781

Most of these advertisements contained information or gave notice where abortifacients or the performance of criminal operations could be obtained. Newspapers containing such advertisements are not admitted to the mails, in accordance with the revised statutes of the United States and the regulations of the Postoffice Department.

In addition, the Postoffice authorities have declared the following names to be fictitious, and mail addressed to them will be sent to the dead letter office and not delivered:

De Myers Dennis Medicine Company.
De Myers Sanitarium, 2112 Olive Street.
Dennis Sanitarium, 2739 Washington Street.
North Side Sanitarium, 809 Bel—— Street.
South Side Sanitarium, 2344 South 12th Street.
Galen Medical Institute, 1516 Chestnut Street.

Besides having their advertising thrown out of the papers and their mail cut off, all of the individuals connected with the above institution, according to the *Missouri Journal*, have been convicted in the police courts of violations of the medical practice act or of the city ordinance.

The State Board of Health, the local medical societies, and the municipal health authorities are certainly to be congratulated on the good work which has been done. As the editor states: "A few more convictions and a few more stop orders by the Postoffice Department will cause the rest of these pests to depart with their wonderful discoveries and their sure cures to more fertile fields." The question arises, however, whether any state will care to furnish the breeding place for this transplanted brood. The information given above ought to be sufficient to warn the physicians in any community and to enable them to prevent the people, each in his own town or state, from being made the victims of these proved frauds.

Postgraduate Courses in Germany.

The annual report of the system of postgraduate instruction which is now being extended all through Germany, with its headquarters in the Empress Frederick House at Berlin, states that last year 29 courses of postgraduate lectures were given by physicians under direction from the central committee, with 2 other cycles with 24 lectures, and 7 lectures on medical economics given under the auspices of the "Seminary for Social Medicine." There were also 10 courses organized for students, given by privat docents and members of the faculty. Another branch of the work was represented by 10 lectures on

first aid to the injured and Red Cross work. The permanent exhibition of medical and surgical instruments, appliances, etc., has been inspected by 5,000 persons, and the demand for the loan collections of casts, lantern slides, etc., for use in postgraduate work is constantly increasing.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Fourth Month.

SECOND WEEKLY MEETING.

Bronchitis.

Acute Bronchitis.

Etiology. Most frequent cause. Inhalation bronchitis. Associated with what acute infectious diseases? Micro-organisms most frequently found on mucous membrane.

Pathologic Anatomy. Changes in mucous membrane. Character of exudate. How do etiologic factors influence pathologic changes and exudate?

Symptoms: Initial symptoms and course. Most frequent complications. Symptoms and signs of onset.

Physical Signs: Physical signs of different stages with relation to changes in mucosa.

Prognosis: On what does termination depend? Influence of age on course.

Diagnosis: With what disease may it be confused? Give points of difference.

Differential Diagnosis.

Chronic Bronchitis.

Etiology. After what diseases does acute form become chronic? Associated with what constitutional diseases. Bearing of climate and season.

Pathologic Anatomy: Changes in different forms.

Symptoms: Age, symptoms and physical signs. Shape of chest.

Clinical varieties: (a) Bronchorrhea, (b) putrid bronchitis, (c) dry catarrh, diagnostic symptoms and signs of each.

Congestion of Lungs.

Active—Occurs in what conditions. Pathology. Symptoms. Differential diagnosis.

Passive—Mechanical. Usual cause. Pathology. Symptoms.

Hypostatic—Occurs in what class of cases. Factors in production. Pathology. Diagnosis.

Hemoptysis.

Causes. Significance. Mode of onset. Physical characteristics of blood. Course. Recurrence as a symptom.

Society Proceedings

COMING MEETING.

Med. Soc. of the State of New York, Albany, Jan. 28.

AMERICAN ASSOCIATION FOR CANCER RESEARCH.

First Regular Meeting, held in New York, Nov. 15, 1907.

Officers Elected.

The society adopted a constitution and elected the following officers: President, James Ewing, New York; vice-president, F. B. Mallory, Cambridge; secretary, Harvey R. Gaylord, Buffalo. The next meeting will be held at Buffalo in the spring of 1908.

Clinical Transfusion and Serum Reaction in Carcinoma and Sarcoma.

DR. GEORGE CRILE, Cleveland, Ohio, cited a case in which there were pathologic hemorrhages due to jaundice, caused by carcinoma of the gall bladder, and which afforded an ideal opportunity for testing the value of normal healthy blood in carcinoma. The patient had been exsanguinated and at transfusion a large amount of blood was transferred. The diagnosis of carcinoma was verified by an exploratory incision. The tumor, however, continued to grow, and although the hemorrhage was controlled there was no evidence that transfusion exerted any influence on the growth. Following this eight other cases of carcinoma were transfused. In none of the cases of carcinoma was there evidence of any influence on the natural course of the disease. Four incurable cases of sarcoma were transfused. Two were so far advanced that no operative measure could be undertaken, not even the partial removal of the tumor. In two, the cases were very unfavorable for an operative cure, but the major part of the growth was excised. In one of the unoperated cases the tumor became softer and regressed, and the patient gained in weight; however, after considerable regression was noted, a stationary period was reached and it finally began to grow again. Retransfusion was proposed, but the patient was not willing. In the two operative cases, one of which was a renal sarcoma, there is no recurrence of the growth as yet, but sufficient time has not elapsed to make these observations of value.

In fifteen cases of carcinoma and sarcoma observed, Crile and Beebe confirmed the observations of previous workers that hemolysis occurs in cases of malignant tumors. The object in making the hemolysis experiments was to determine the suitable cases for transfusion, as they had seen hemolysis of the new blood in some of their earlier cases. They also wished to determine whether or not this might afford a method of diagnosis, as suggested by Dr. Sam Peskind. In all but one case of carcinoma there was hemolysis, and in all of the cases of sarcoma it was obvious that the extent of the hemolysis was dependent, in part, at least, on the extent of the disease. It seemed to be rather quantitative. It is interesting, too, to note that two cases of advanced sarcoma, while they each hemolyzed normal blood, did not hemolyze each other. Various combinations were tried to determine whether or not data of diagnostic value could be obtained. In one case of a very large tumor of the breast, supposed to have been a benign tumor which had become malignant, there was no hemolysis, and at operation the tumor was found to be benign. Marked hemolysis was found in a case of carcinoma with metastasis in the liver. Of interest was the observation in a case of extensive carcinoma of the breast, operated on five years ago, the patient having returned to the hospital with a suspicion that there was recurrence. Her blood showed no hemolysis and a careful physical examination did not reveal any evidence of growth. Crile said that it will require many more observations and a greater refinement in the technic before one can determine whether or not this method will be of specific diagnostic and prognostic value. There is some evidence that it may become of such value.

Cancer in Mice.

DR. H. R. GAYLORD, Buffalo, reported from the New York State Cancer Laboratory further observations on a breeding establishment in Massachusetts, where cancer in mice is endemic. This is the same establishment which was reported at a meeting of the British Medical Association, in Toronto, in August, 1906. At the present time the laboratory has records covering eighteen months, during which time it has received fifty-one tumors in mice and knows of twelve other tumors in mice supplied to other scientists during this period, sixty-three tumors developing in mice during the period of eighteen months. In this time this breeder has reared approximately 7,000 mice. These fifty-one tumors, with the exception of one, have occurred in female mice. Forty-nine of them are tumors originating in the breast in females, one a squamous-celled epithelioma of the vulva and one a fibrosarcoma surrounding the right humerus. The breast tumors were distributed over the abdominal aspect and corresponding to the normal distribution of mammary tissue in the mouse. They presented everything from a simple adenoma to carcinoma solidum. In practically every tumor transition from simple adenoma to adenocarcinoma and carcinoma solidum could be traced. Fifteen of these tumors were transplanted; three took in the first generation and died out in the second; one continued and is now in the sixth generation.

Within the last year this breeder has begun breeding white rats at Gaylord's suggestion, and in stock coming from her establishment he has found four rats with spontaneous tumors. All of these tumors have been fibroadenomata of the breast, with the exception of one, which is unquestionably an adenocarcinoma. During this period the breeder has raised about 1,000 white rats. The laboratory has had business relations with a breeder in Washington for the past three years, who sells about 2,500 white mice per annum, and as many white rats. He has never been able to supply a single tumor from his own stock. The laboratory possesses at present five transplantable mouse carcinomata, and the spindle-celled sarcoma of the thyroid in a rat, previously described as developing, with two other cases of fibrosarcoma, in a cage which had been used by Dr. Leo Loeb for sarcoma rats brought from Chicago. This sarcoma of the thyroid has now been transplanted through eight generations. The number of successful inoculations was surprisingly high in the first generation, giving 5 tumors in 23 inoculated rats, or 21.8 per cent. In the second generation but 6 tumors developed in 172 inoculated rats, being 3.5 per cent.; the third generation, 14 tumors in 61 rats, or 23 per cent.; fourth generation, 8 tumors in 125 rats, or 6.4 per cent.; fifth generation, 29 tumors in 90 rats, or 32.2 per cent.; sixth generation, 37 tumors in 260 rats, or 14.2 per cent.; seventh generation, 12 tumors in 123 rats, or 9.8 per cent.; eighth generation, 99 rats have been inoculated, in which thus far but four tumors have developed. Summary: Total number of rats, 854; total number of tumors, 111; percentage of tumors, 13.

These tumors frequently reach great size, even exceeding that of the rat. There is no notable increase in virulence, the relatively high percentages obtained in one generation frequently falling low in the next. This is thought to be owing to the lack of susceptibility in certain races of rats. The tumor appears to take just as well in parti-colored rats as in white rats. There have been occasional spontaneous recoveries, and these rats have proved immune. The histologic characteristics of the tumor have not changed; it presents the characteristics of spindle-celled sarcoma.

A careful examination has been made of the different strains of transplantable mouse tumors in the laboratory in search of sarcomatous changes in the stroma of transplanted mouse carcinomata, as first described by Ehrlich and Apolant, and recently observed by Bashford, but no evidences of such transformation was found in any of the transplanted strains.

A few months ago the laboratory came into possession of a female thoroughbred English bulldog suffering from round-celled sarcoma of the vagina of the type described by Smith and Washbourn, Sticker, Bashford, Ewing and Beebe. Through the kindness of Dr. Beebe a spontaneously recovered and supposedly immune dog was sent from New York, and Dr. Crile came to Buffalo, and after deep bleeding transfused the blood of the immune dog into the dog with the primary round-celled sarcoma. During the first two weeks there was marked diminution in the size of the tumors, the mass which entirely filled the perineum decreased in both dimensions 2 c.c. and then remained stationary for a period. When it seemed to grow again, a second partial transfusion of the blood of a normal dog was performed. This made no impression on the tumor. A third transfusion was undertaken, employing two immune dogs furnished by Dr. Beebe, but, unfortunately, the dog was lost through the anesthetic. From this experiment it would appear that round-celled sarcoma acquired in the natural way by dogs may be influenced by transfusion with the blood of dogs rendered experimentally immune by spontaneous recovery from an inoculation tumor.

Observations on the Hemolytic Reactions of the Blood in Dogs Affected with Transplantable Lymphosarcoma.

DR. WEIL stated that his material consisted of eight dogs, some of which were actively growing tumors, others of which were in a stage of regression, while still others were entirely cured of their tumors. In addition, there were a number of control animals, without any history of tumors; some of these were healthy, others in very poor condition. From all of these animals serum was obtained, and also red blood corpuscles, the latter being made up to a 1 per cent, emulsion in normal salt solution. Corpuscles and sera of different animals were then mixed in definite proportions. Up to the present, more than 200 such reactions had been tried. It has been found that the serum from animals with tumors is almost, without exception, actively hemolytic. This activity seems to vary with the rate of growth of the tumors; it is, however, also present in animals in which regression is in progress, and to some extent also in recovered animals. The corpuscles of dogs with tumors, or recovered from them, are invariably more resistant to the hemolytic activity of sera derived from tumor dogs than are the corpuscles of dogs without a history of tumors. This resistance is not absolute, but distinctly greater than in other animals. The serum of dogs without a history of tumors is almost, without exception, non-hemolytic. The hemolytic activity of sera from tumor dogs is not due to anisotonicity.

Hemolytic Reactions of the Blood in Human Beings Affected with Malignant New Growths.

DR. WEIL found that the hemolytic activity of human serum, tested against human corpuscles, is extremely slight, and requires the use of far larger quantities of serum, and of smaller numbers of corpuscles, and observations extending over a much longer period of time. The serum of patients with malignant new growths has been found in a very large percentage of cases to be hemolytic under the conditions above stated. The resistance, or relative immunity of their corpuscles varies, but is ordinarily less than in normal individuals. A certain number of patients with tumors have serum which is not hemolytic when tested by any of the methods available. The distinction between the hemolytic and the non-hemolytic sera does not correspond to any clinical difference, notably not to ulceration of the tumors; two very much ulcerated cancers of the stomach were associated with non-hemolytic sera. Hemolytic activity is found in certain other conditions, notably certain infectious diseases, e. g., pneumonia and tuberculosis. Inactivation by heat seems to afford a differential between some of these sera and those of tumors. The far advanced cases of new growth do not owe their power to the secondary anemia, inasmuch as marked secondary anemias from other causes, and pernicious anemia, as far as hitherto examined, fail to show hemolysis.

Nature of the Infectious Lymphosarcoma of Dogs.

DRS. JAMES EWING and S. P. BEEBE reported further studies on the nature of the infectious lymphosarcoma of dogs, with special reference to the possibility that this disease might be a form of canine syphilis. Systematic studies of transplanted tumors stained by Levaditi's method, during the past two years, failed to show the presence of spirochetæ in any intact tumors. Seven additional primary cases of the disease located in the vagina, obtained from Dr. T. G. Sherwood and Dr. C. Coakley, were examined by Levaditi's method. In one of these large numbers of spirochetæ were found in the ulcerated surface of the excised lesions, along with other bacteria. These spirochetæ resembled *Spirillum pallida*, and were found chiefly along the vessels of the trabeculæ, but also in and between the tumor cells. At some points the spirochetæ penetrated deeper than the bacteria; in others the bacteria were found deeper than the spirochetæ. This relation offered as strong evidence in favor of the etiologic relation of the bacteria as of the spirochetæ, but was inadequate to establish any importance for either organism. In one other case a few spirochetæ were found only on the ulcerated surface, while in the remaining five cases no spirochetæ were found in the tissues removed. Search for the involution forms of spirochetæ such as are found in tertiary syphilitic lesions was negative. It was thought that the spirochetæ might be very scanty, but yet present in the transplanted tissue, and might multiply after transplantation, while the graft was taking. In grafts removed at intervals of forty-eight hours to five days after transplantation, no spirochetæ were found by Levaditi's method. All these grafts appeared to be growing when removed. The fate of the transplanted cells was again followed in two series of plants, and the conclusion reached in previous experiments, that the tumor grew from the transplanted cells and not from the host's tissues, was fully verified. These results, together

with the histology of the primary growths, and especially of the visceral metastases, the loss of infectivity of the filtrate through paper, seem to show satisfactorily that this disease is not an infection by spirochetæ or any other viable microorganism, but is a true malignant neoplasm.

Transformation of Carcinoma into Sarcoma.

DR. JAMES EWING discussed the significance of the transformation of mouse and rat carcinoma into sarcoma, reported by Ehrlich, Apolant, Loeb and Bashford. He urged that the occurrence of such transformations in the tumors of lower animals need not necessarily have any bearing on the behavior of human tumors, since the separation of cell types in tumors of lower animals appeared to be less rigid than in man. He believed that the mere presence of spindle cells exclusively in such mouse tumors was quite inadequate to prove their sarcomatous nature. He demonstrated a human adamantinoma, an hepatic metastasis of human melanoma, and tumors of the dog breast, in which the cells were largely of typical sarcomatous morphology, although of epithelial origin and nature. The adamantinoma, in places, strongly resembled Ehrlich's mixed tumor, but the spindle cells revealed their epithelial nature by the formation of enamel granules. It was especially in tumors of embryonal origin that these variations of cell form were to be expected, and it was perhaps unwarranted to compare such tumors with the mixed tumors of mice. Yet the mixed tumors of mice showed some indications that they were derived from embryonal tissue. Apolant and Bashford claimed to have demonstrated the development of the sarcomatous element from the transplanted stroma, but had not published photographs illustrating the process, while Apolant admitted the presence of some cells suggesting the transformation of epithelium into spindle cells. In Loeb's mixed tumor of a rat the sarcomatous element appeared to come from the host's connective tissue, or possibly from entirely separate islands of sarcoma in the original tumor. The observations on the nature and source of the spindle cells of the carcino-sarcoma of rats and mice were, therefore, not in entire agreement, and until further information concerning them was available one could not determine the real significance of these anomalous transformations of tumor structure. At present there appear to be four possible sources of the spindle cells of these transplanted tumors: 1, Transformed epithelial cells; 2, a sarcomatous element in the original tumor; 3, the stroma of the original tumor; 4, the connective tissues of the host.

Transformation of Carcinoma into Sarcoma.

DR. W. E. COLEY cited three clinical cases. The first was a case of sarcoma of the breast in a woman, about 45 years of age. The primary operation was performed by another surgeon and the disease was pronounced typical carcinoma. A local recurrence, clinically of an absolutely typical carcinoma, took place one year and a half later, and a second operation was performed. A microscopic examination was made and confirmed the diagnosis of carcinoma. About four months later, without any involvement whatever of the supra- or infraclavicular or cervical glands, a tumor developed in the angle of the jaw on the same side. This grew very rapidly and was removed at the end of three or four weeks, when it had reached the size of an English walnut. Careful microscopic examination was made by Drs. E. K. Dunham and B. H. Buxton, who pronounced it hyperplasia. From the rapid growth of the tumor and its clinical appearance, Dr. Coley believed it to be sarcoma. It recurred within a very few weeks, grew more rapidly than at first and when again the size of a small egg, was removed by Dr. Coley. This second tumor was also examined by Drs. Dunham and Buxton, and after taking a number of sections they made the diagnosis of small round-celled sarcoma. The tumor recurred within two or three weeks, grew with great rapidity, until finally it occupied the entire side of the face and neck and nose. It was then five months from the time it was first noted.

Dr. Coley cited another case of sarcoma and carcinoma occurring in the same individual. In this case the primary tumor was a sarcoma of the abdominal wall which was removed by a very extensive operation. The patient remained well for ten years, when she developed carcinoma of the breast.

In the third case cited the primary tumor was an adenocarcinoma of the rectum which was removed. Recurrence took place shortly afterward in the inguinal glands, and in this case careful microscopic examination showed the disease to be sarcoma. Dr. Coley had observed one case in which the primary tumor was sarcoma and a local recurrence seventeen years later was carcinoma. He also cited the well-known clinical fact that in families in which the hereditary influence was well marked it was not uncommon to find carcinoma in one member of the family and sarcoma in the other.

Mixed Toxins in Hodgkin's Disease.

DR. W. E. COLEY showed a patient with Hodgkin's disease, who had been treated with the mixed toxins of erysipelas and bacillus prodigiosus. The patient, male, aged 24 years, first noticed an enlargement of the glands on the right side of the neck a year ago. Three to four months later he noticed an enlargement in the axillary glands and a little later in the glands of both groins. His general health began to fail and he lost twenty pounds in weight. He was admitted to the General Memorial Hospital on Oct. 10, 1907, at which time he weighed 165 pounds. The blood count showed the following: Leucocytes, 4,050; red blood corpuscles, 4,070,000; polynuclear, 62 per cent.; large lymphocytes, 18 per cent.; small lymphocytes, 17 per cent.; transitionals, 3 per cent. The patient was placed on the mixed toxins, the injections being made in the pectoral region. The initial dose was ¼ mm.; the highest 1½ mm., which latter caused a temperature of 105.6. At the end of two weeks he developed toxemia and ran a temperature of 102-103, nearly every day, for more than a week, during which time he received no treatment, and lost eight pounds in weight. The toxemia was, no doubt, due to too rapid breaking down of the tumors. After the temperature fell to normal the toxins were resumed in smaller doses. Up to November 15 he had received fourteen injections, with the result that the tumors of the neck, axillæ and groin have practically disappeared, having diminished fully nine-tenths; the spleen was hardly palpable. The disease in this case was pronounced typical Hodgkin's disease (giant celled) by Drs. W. C. Clark and James Ewing.[1]

Dr. Coley showed the case as additional evidence in favor of the theory that Hodgkin's disease is really a type of sarcoma, and not an independent infectious disease, as believed by many. He stated that the argument usually advanced against Hodgkin's disease being a malignant tumor, was that it was never encapsulated; in its extension throughout the body it always confined itself to lymph gland tissue. This, however, he declared, was by no means true. He cited a personal case in which the tumor had been examined by Dr. Ewing, as well as by a number of other men, and pronounced typical Hodgkin's disease of the giant-celled type. Clinically, it was typically sarcomatous, and autopsy showed that in the inguinal region, the point of origin in this case, the tumor which was larger than a child's head, not only infiltrated the capsule, but infiltrated fascia, muscle, periosteum and bone, precisely like a malignant tumor.

Production of a Spindle-Celled Sarcoma Through Transplantation of a Carcinoma in a Japanese Mouse.

DR. LEO LOEB said that after transplantation of a carcinoma, carcinomatous and sarcomatous tumor nodules were found as early as in the second generation of Japanese mice, in experiments carried out in the spring and summer of 1904. Certain tumor lobules found in the second generation consisted of a very intimate mixture of carcinomatous and connective tissue cells. In this case the two types of cells were of a surprising similarity. These structures were probably produced through a diffuse ingrowth of connective tissue into the carcinoma. Similar structures were demonstrated by the author in a spontaneous carcinoma of a white mouse. The sarcoma of the second generation took its origin in the connective tissue which surrounded the carcinoma. In order to study the difference in the fate of pieces of tumor after transplantation into

1. At the end of another week all tumors had entirely disappeared.

the same animal in which the tumor had developed spontaneously, and into other animals of the same species, experiments were carried out with a mixed mammary tumor of a dog. After transplantation into the same dog, the pieces remained alive *in toto*, no central necrosis taking place in the transplanted pieces. After transplantation into other dogs the pieces became entirely necrotic. Dr. Loeb found that multiple deciduomata in the uterus of a guinea-pig can be produced at will in every guinea-pig at a certain period after copulation has taken place. They represent transitory benign tumors. They may also be regarded as the maternal portions of the placenta which originates without the usual stimulus of the embedded ovum.

Transfusion in Sarcoma.

DR. S. P. BEEBE reported the final results in a series of transfusions carried out by himself and Dr. George W. Crile. A series of ten dogs having lymphosarcoma actively growing were transfused with the whole blood of naturally or spontaneously immune dogs, and in eight cases the transfusion was followed by a complete retrogression of the tumors. The animals have been repeatedy planted since the absorption of the tumors, but in no case has it been possible to obtain growth in an animal cured by the transfusion. It is not possible to state accurately the relative importance of the blood from naturally immune or spontaneously immune animals in this process, but the impression gained during the course of the experiments is that a large transfusion from a spontaneously recovered animal gives the best results.

Tumor of the Rat.

DR. SIMON FLEXNER reported the results of Dr. Jobling's and his study of a rat tumor springing from the seminal vesicle. This tumor has now been transplanted systematically for more than two years and through about twelve generations. The tumor is relatively a slow-growing one; to reach the size of a walnut takes about three months, which is also about the average length of time required to produce internal metastases and bring about spontaneous death.

The implantations can be made successfully into the subcutaneous tissue, the muscles and the peritoneal cavity. In the first cases ulceration of the skin tends to occur, the tumor mass to slough away, leaving a thin layer of tumor infiltrating the skin and subcutis from which metastasis may occur; in the second cases the growth is infiltrative and presses through muscle, bone, etc., and also becomes metastatic; in the third case nodules arise in the omentum and distribute themselves over the peritoneal cavity and to the lungs, etc. When the abdominal cavity is invaded either by direct implantation or by extension from the adjacent tissues, a common site of tumor growth is between the esophageal extremity of the stomach and the diaphragm. The walls of the stomach are often penetrated so that ulcers by digestion are formed, and from an ulcer on one side, the other and opposed side of the stomach may be infected and a tumor produced which may ulcerate subsequently. The cells of the tumor are considerably more differentiated than is the case with the simple sarcomata; they are larger and rather of epithelioid or endothelioid character, besides which they are not disposed in a simple and uniform manner, as in the simple sarcomata, but they may be united into a tolerably uniform tissue, or they may be aggregated into strands, separated by thin bands of fibrillar tissue, and thus present an organoid appearance. This character is present in the original tumor and has been repeated through the transplantation generations.

At the beginning of the growth of the implanted masses, spindle cells, of simple sarcomatous types, or a mixture of these and fibroblastic cells, appear in great numbers, and the larger, peculiar cells of the tumor are less conspicuously present. This relation may hold in the growing tumor mass, although, as a rule, the larger cells tend to increase in number and to predominate over the others, and every developed tumor shows more or less of the tubular structure mentioned. However, at times, a tumor graft will start to proliferate entirely, or nearly so, from the larger cells and begin at once to produce strands separated by connective tissue, so that the sarcomatous character is suppressed and the organoid character made dominant. But here again the developed tumor will contain both elements, although the organoid element may now predominate.

The eleventh generation of the tumor has divested itself largely, if not entirely, of the simple sarcomatous character and has become a tumor of proliferating tubular or adenomatous type. That is, the large cells now line large branching spaces and lie on a relatively dense connective tissue support. The cells form more than a single layer and the granular protoplasm surrounding the individual nuclei is not differentiated separately. The cells themselves have changed less in character than in arrangement and in relation to the stroma. The tumor as it presents itself in this generation could not be held to be a sarcoma. A macroscopic change in texture, etc., has accompanied the change in microscopic appearances, and lymphatic metastasis, previously very uncommon, has now become relatively frequent.

A growing tumor does not prevent a second and even a third graft from taking in the same animal. The secondary grafts can be implanted anywhere—immediately next to the growing tumor or at a distance. As stated in percentages, the secondary grafts tend to remain below the primary, which in certain cases may reach 100 per cent. In every large series of successful implantations a certain number of spontaneous retrogressions occur. Rats which have recovered spontaneously are protected, although not absolutely, from successful reimplantation of the tumor. This immunity endures for a period of several weeks, but not indefinitely, at least not in all the animals. That this is a fact is shown by the higher percentage of successful reimplantations in animals which had recovered spontaneously three months before as compared with those which had recovered only one month before the secondary inoculation. This immunity appears to be histogenetic. That is to say, it can not be conferred on uninoculated rats by transferring the blood serum or corpuscles of recovered rats. Blood serum has no restraining effect on the tumor growth. Blood corpuscles do restrain the growth somewhat. But the degree of restraint is about the same whether the blood corpuscles come from normal rats or rats which have recovered from the tumor.

An emulsion of the tumor does not inhibit or promote the growth of tumor grafts unless it has been heated (50 C. for half an hour), when it exerts a marked promotion of tumor growth as indicated by the percentage of successful implantations, the greater rapidity of growth, and the fewer number of retrogressions. This heated emulsion can overcome, at least to a small degree, the strong acquired immunity of rats which have recovered from tumor, and to a larger degree the natural refractory condition which is found in rats which have resisted implantation of a tumor of less than maximal virulence. Emulsions of the organs of rats do not exercise this influence.

The implantations are less successful in hybrids (mixed white and black rats) than in white rats, and of twenty wild gray rats inoculated, no one showed tumor growth. Mice are insusceptible to the tumor, although the grafts may first enlarge somewhat and remain alive in the subcutaneous tissue, so that they can be reimplanted in the rat for about thirteen days.

Fine emulsions of the tumor, strained through gauze and filtered through paper, are uninfective for white rats. Since the fine emulsions still contain intact tumor cells, it would appear that cell-aggregates, or possibly aggregates of cells and stroma, are essential to successful implantation. Peritoneal fluid containing microscopic tumor masses can be used successfully for intraperitoneal inoculation, but the fluid from cysts which occasionally develop in large intramuscular and subcutaneous tumor nodules was not infective.

DISCUSSION.

DR. F. B. MALLORY, Boston, suggested that it is possible that the changes in the structure of the tumor described by Dr. Flexner are not so difficult to explain as they seem to be. An analogous relation exists normally between the ependymal and neuroglia cells of the central nervous system. In early embryonic life the latter are derived from the former. In adult life,

in certain situations (covering the choroid plexus) the ependymal cells do not produce neuroglia fibrils; lining the ventricles and the neural canal they may. It has never been definitely decided. The neuroglia cells themselves, of course, are surrounded by numerous neuroglia fibrils. In a glioma over the coccyx, which he reported several years ago, the original tumor consisted of neuroglia cells of the large embryonic type surrounded by their neuroglia fibrils. Masses of these cells, together with their fibrils, were embedded in a connective tissue stroma. Some of the metastases of this tumor in the groins showed a papillary adenomatous structure lined with ependymal cells having fibrils at their base, although neither the original tumor nor its recurrence showed any such picture. In other words, there are two types of cells (one epithelial-like, the other connective tissue-like) produced in one tumor. Dr. Mallory thought that in Dr. Flexner's case we are, perhaps, dealing with a primitive type of cell which may differentiate into cells of different types just as the original mesodermal cells give rise to mesothelial and mesenchymatous structures; i. e., his tumor may be a simple type of embryoma in which the cells which tend to differentiate like epithelial cells have become the more prominent.

DR. H. R. GAYLORD, Buffalo, pointed out that the essential of the observation of Gaylord, Clowes and Baeslack on the immunity following spontaneous recovery of mice from inoculation tumors was that the animal must have acquired the disease. In his opinion there was no essential difference in the phenomenon observed by Ehrlich in which after repeated inoculations a certain residue of mice were found with acquired immunity. In his own observations he assumed an arbitrary standard as evidence of tumor formation. The tumor must have existed in the mouse a certain number of days and reached a certain size before he was willing to concede that it had acquired a tumor. Fifty per cent. of the spontaneously recovered animals were found in the very earliest period accepted, and it seems that the animals rendered immune by repeated inoculations as carried out by Ehrlich must be those in which the processes of spontaneous recovery have taken place. The only difference between his work and Ehrlich's is that he required as evidence of spontaneous recovery a palpable tumor, and that animals which recovered from such tumors were immune to further inoculation with the same tumor. It is gratifying to find, he said, that Dr. Flexner had observed the same phenomena in his rat tumor that he had first observed in mice and since in his rat tumor, although they differed distinctly in growth and histologic characteristics.

Dr. Gaylord called attention to an apparently new phenomenon observed in the State Laboratory in the sarcoma rats. Dr. Flexner had stated that there was no difficulty in implanting a second tumor in an animal in which a first inoculation had been successful, as opposed to the observation of Ehrlich, later confirmed by Clowes, that in mice the establishment of a first inoculation tumor usually prevented the development of a second inoculation. In attempting to repeat this observation in sarcoma rats, animals were reinoculated every six days, with the result that it has been found that some 25 rats out of 40 thus inoculated have developed more than one tumor. These have persisted side by side for a period equal to that usually required to kill when the tumors were not inhibited, and then retrograded. The tumors make their appearance successively, some growing as large as small hazelnuts and then remaining stationary for a period of from twenty to thirty days, when the tumors entirely disappear in a period of from seven to eight days. In only one case did a rat develop two tumors which grew until exitus. A number of these rats have been reinoculated, some of them a year later, and have proved to be immune. This phenomenon has occurred so often that it appears to be characteristic of the present state of virulence of this tumor and suggests that repeated successful inoculations may, under certain conditions, tend to bring about immunity, where one inoculation does not suffice. It is possible that the marked difference in this respect between this tumor and Dr. Flexner's, in which multiple grafts regularly grew side by side to exitus, may be explained by the great virulence (90 to 100 per cent.) of Flexner's tumor, and the relatively low virulence (13 per cent.) of Gaylord's, but it appears that in many respects each tumor is a law unto itself, with the exception of certain basic phenomena which have now been found with sufficient regularity to establish their character as fundamental.

DR. JOBLING reported that in their experience with the rat tumor at the Rockefeller Institute, the growth of secondary and tertiary tumors apparently did not affect the rate of growth of tumors already present in the animal.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held Dec. 11, 1907.

The President, DR. JAMES B. WALKER, in the Chair.

SYMPOSIUM ON DISEASES OF PHYSICIANS.

Diseases of Physicians.

DR. ROLAND G. CURTIN presented a summary of his experience in the study of diseases of medical men, with a tabulation of the cases and remarks on the frequency of diseases, some of which were unusual and some more common. The probable cause was given, also the mode of life necessary to preserve health, with directions tending to prolong the practitioner's life, especially in old age. The statistics given did not embrace slight ailments or any of the severe forms of disease in which Dr. Curtin had been called in consultation. His findings in regard to the drug habit among physicians differ from the conclusions of Dr. Crothers of Connecticut. The showing of 28 deaths from angina pectoris bears out the appellation of "doctors' disease" for this affection. Only four cases of Bright's disease were noted, all of severe type. The milder ones were not mentioned. Ten cases of renal calculus were found. The cause of this large number was difficult to explain. At least half of the number were young practitioners. A general study showed that clergymen have twice the chance to attain the age of 65 that the physician has. This is accounted for by the constant stress attendant on the physician's life. The automobile was said to greatly add to the strain on the nervous system.

The Longevity of Physicians.

DR. JOSEPH P. TUNIS showed that the mortality of the medical profession is higher than that of all other occupations. According to Dr. Ogle's statistics, the farmer is the longest lived, and the clergyman enjoys the greatest longevity of the learned professions. G. M. Beard, in 1866, said that "the greatest and hardest brain workers of history have lived longer, on the average, than brain workers of ordinary ability and industry." Beard found that the average age at death of 500 of the greatest men in recorded history was 64.2. From an insurance point of view, physicians have shown a slightly greater mortality than was anticipated. Taking them as a whole, they are, however, "average risks."

MORTALITY TABLE OF PHYSICIANS AT DIFFERENT PERIODS.

Year.	No. investigated.	Investigator.	Mortality.
1834	624	Casper	56.4
1885	3,865	W. Ogle	59.3
1886	8,627	J. M. French	56.47
1907	2,000	J. P. Tunis	60.6

Dr. Tunis concludes that statistics prove: (1) The truth of the popular belief that all men live longer nowadays than they did fifty years ago; (2) that the most satisfactory statistics of longevity can be secured only by selecting groups of men living under the same conditions; (3) that the diseases to which physicians are especially liable affect the cardiovascular and nervous systems; (4) that the secret of long life would seem to lie in abstemiousness, brain work and contentment, presupposing a sound mind in a sound body.

Diseases of Great Physicians of the Past.

DR. WILLIAM PEPPER pointed out the difficulty in drawing conclusions as to the commonest forms of disease in the physicians whose names were mentioned, as it was only in those cases in which the men had suffered from some interesting disease that the cause of death was given. The cases are, however, classified according to certain loose groups, the most interesting group including those who have described diseases and have themselves suffered from the same disease. Another

group includes those who have fallen victims to various diseases in the line of their duty. Laennec fell a victim to a disease, the nature of which he had taken pains to describe. Lancisi and Corvisart died of diseased heart, and Boyle sank under the ravages of the disease of which he had been the most successful illustrator. Sir Benjamin Brodie, the great surgeon, died of cancer of his right shoulder joint. Dupuytren, the most famous surgeon of the last century, died of an empyema. Refusing to submit to an operation, he said that he "would rather end his life through God's hand than that of a surgeon." In more recent times Mikulicz, who wrote on cancer of the stomach, himself fell a victim to this disease. Fowler, of Brooklyn, having written on appendicitis, died of this disease. On the memorial tablet of Dr. Jesse W. Lazear, who died of yellow fever, are the words, "With more than the courage and devotion of the soldier he risked and lost his life to show how a fearful pestilence is communicated and how its ravages may be prevented." Dr. Guillotin, the inventor of the guillotine, had his own head chopped off. A number of distinguished physicians have been great sufferers from the gout. Sydenham said: "More wise men than fools are victims of this affection." Angina pectoris has claimed its share of the medical profession, and in this group may be mentioned the names of Sir James Y. Simpson, Sir Charles Bell and John Hunter. Instances are cited illustrative of Osler's statement that the profession offers many examples of good work thoroughly and conscientiously carried out by men with aneurism of the aorta. Dr. Thomas King Chambers first had an aneurism in the left popliteal artery, eleven years later one in the right leg cured by pressure, and finally aneurisms of the carotid arteries. Richard Bright died of the consequences of extensive and long-standing ossification of the aortic valves of the heart, the exit for the blood being reduced to a mere chink. Robert Liston died of an aneurism of the aorta, which must have existed for years, and been fostered by the great physical exertions, which characterized his recreation as well as his work. Another group is given, including those having suffered from apoplexy, and still another and larger group is classified under the heading of miscellaneous.

DISCUSSION.

DR. JAMES C. WILSON said that there are two main groups of morbid conditions to which physicians are particularly liable: the infectious diseases of adult life, and the general diseases of the period of involution of life, diseases especially of the cardiovascular system, of the kidneys and of the nervous system. Neurasthenia, the drug habit and alcoholism are also to be considered. These are said to be the result largely of improper living combined with inherited feebleness of organism. The man who enters on the practice of medicine with impaired powers of resistance and lack of self-discipline is liable to become neurasthenic or to fall a victim of one of the drug habits.

DR. JAMES M. ANDERS, commenting on the frequency of cardiovascular degenerations among physicians, declared that the experience of any single physician or group of physicians even could not solve the problem, since individual experiences differ widely. As pointed out by Dr. Tunis, physicians live under different conditions, pursue different lines of professional work, and their habits are equally various. Dr. Anders holds, however, that it is possible to accumulate a sufficiency of data on which to base valuable practical conclusions. An analysis of 115 cases showed tuberculosis to be present in nearly 15 per cent., while organic heart disease, gout, obesity and neurasthenia stood second in point of frequency. Angina pectoris, diabetes mellitus and nephritic colic—conditions which appeared to lead in Dr. Curtin's experiences—were less common, although when compared with their incidence in general the percentage among physicians is still abnormally large. The cases of angina pectoris, nephritic colic and diabetes occurred among men who might be counted as brain workers, but they also led unusually sedentary lives and were given to the pleasures of the table. Of morphinism in doctors there were five cases, which result agreed with Dr. Curtin's statistics rather than with those of Dr. Crothers. It is remarked, however, that morphin is often used in secret by physicians. Dr. Anders feels strongly that an extensive statistical inquiry would reveal sufficient facts and data on which to base valuable conclusions. The subject is one bringing up the whole question of the influence of occupation as a causative factor of disease, which, whether considered in relation to the professional crisis, brain workers in general, merchants, artisans, clerks or laborers even, is not fully appreciated by the medical profession.

DR. DAVID RIESMAN referred to a feeling prevalent among the laity that physicians have no right to be ill, and regarded it as probably a relic of the superstition of the barbaric age when disease was looked on as a demon that could be exorcised by the medicine man, who, naturally, if he could drive it out of the patient, would drive it out of his own body. Instances were cited of disease contracted in the course of the work of physicians. Whether physicians are prone to certain diseases could only be learned by statistics. Dr. Riesman's own practice shows that of some diseases there is a rather large number of cases among physicians. He has had seven cases of appendicitis, two of tuberculosis of the lungs, two of pneumonia, ten of neurasthenia, four of arteriosclerosis and a number of others, one and two of a kind. Arteriosclerosis seemed to be rather common. Two of his patients were under 35 years of age and were total abstainers in regard to alcohol. Loss of sleep and the use of tobacco are generally considered productive factors. His experience shows neurasthenia to be rather profound in the medical profession. While it can not be said that physicians are exempt from disease, it is believed that they will work longer when handicapped than any other class of men, because of their sense of responsibility and the fact that no one can take a doctor's place.

DR. JAMES TYSON has seen a good many physicians with enteric fever. He has often been consulted for morphinism by physicians who realized their complete helplessness. He has also known cases in which physicians have most successfully overcome the habit. The cocain habit in his experience has been a very frequent occurrence among physicians. This habit is much more easily overcome than morphinism. Of angina pectoris he has seen a number of cases. Two cases were cited showing the impossibility of drawing conclusions of a prognostic character from the symptoms. The presence of albuminuria and casts in the case of a physician who has been very much overworked, but which pass away almost immediately on rest, is a condition falling under his observation. Neurasthenia he regarded as almost a doctor's disease, stating that, after women, doctors come in as a class of neurasthenics.

DR. JAY F. SCHAMBERG regards the strain and stress under which the physician lives and his exposure to contagious and infectious diseases as essential factors in the varying incidence of certain diseases in the medical profession compared with the general population. He referred to the fact that Dr. Edward Jenner was the first to call attention to the pathologic cause of angina pectoris and refrained from publishing his views on the subject during the lifetime of John Hunter because of his intimacy with his friend and teacher, and, although he made known his views to the physicians of Hunter, he was only given credit for his knowledge after Hunter's death, when these gentlemen found a calcification of the coronary arteries.

DR. ALBERT R. MOULTON, from his experience with cases of drug addiction, is inclined to believe that the percentages given by Dr. Crothers of the drug habit among physicians are exaggerated.

DR. ROLAND G. CURTIN stated that in fifteen deaths from angina pectoris among physicians five had died suddenly after a hard day's work and a hearty meal. He suggested that the heaviest meal should not be taken at night and that the physician should rest, if tired, before and after the meal. After the age of 50 it is important that physicians gradually reduce their work, avoiding night work and shortening that of the day.

DR. WILLIAM PEPPER said that, as the historian of the evening, he would simply refer to that good old physician Rabelais, who, after his study of this subject, said that "there be more old drunkards than old physicians."

Book Notices

SURGICAL INSTRUMENTS IN GREEK AND ROMAN TIMES. By John Stewart Milne, M.A., M.D., Aberd., Keith Gold Medallist in Clinical Surgery. Illustrated. Cloth. Pp. 187. Oxford: The Clarendon Press, 1907.

There is no more gratifying sign of the returning scholarship in medicine than the fact that a modern physician can spend "five or six years" in an investigation such as that presented by Dr. Milne in his "Surgical Instruments in Greek and Roman Times." This is no piece of quasi "scholarly" work perpetrated by an hour's search nightly into indexes, but the result of painstaking research at home and abroad in the very texts themselves of ancient writers and among the various "finds" of ancient surgical instruments preserved to us in the treasures of widely scattered museums. Neither is it the work of some veteran practitioner of medicine, undertaken as a form of intellectual recreation during the well-earned leisure consequent on a life of successful and fairly remunerated toil, but of one comparatively on the threshold of his professional career, but who has already given evidence of "practical" attainments and shown promise of an eminently successful future in his chosen sphere.

The author first gives a brief account of those ancient authors whose writings have any bearing on his subject. This is followed by a chapter on the material, execution and ornamentation of ancient surgical instruments in general; after which he proceeds to a detailed consideration of the various forms of instruments and "*étui*," or outfits, a term that would include our modern dressing cases, instrument cases, medicine chests, etc. Appendixes contain inventories of the chief instruments in the museums of England, France, Belgium, Germany, Austria, Greece, Denmark, Switzerland and Italy, and a bibliography of the subject. The work concludes with a triple index of English, Latin and Greek terms, and a series of fifty-four full page half-tone illustrations of various instruments from specimens extant in museums and in the private collections of the author and others.

Coming to the subject matter, we learn that the material used for instruments was principally highly tempered steel and bronze for the cutting instruments, while in such instruments as they might be suitable for, tin, lead, gold, silver, horn, wood, bone, ivory and stone were variously employed. Of the steel instruments comparatively few remain to us, owing to the perishable nature of steel by oxidation. While instruments entirely of bronze are numerous, the bronze handles only of many instruments are found. In these cases the blade was doubtless of steel; so that we must not imply from the vast preponderance of bronze a comparative paucity of steel, for, as the author is careful to point out, the heaps of scoria left wherever there was good iron in the Roman provinces clearly indicate to how great an extent iron was in use; while the scoria left in the Forest of Dean alone by the Roman founders contained such a large percentage of iron that "they were smelted over again in later times, and to do this occupied over twenty furnaces for a couple of centuries." The idea that iron alone was at the disposal of the ancients is an error based on the fact that one word in both Latin and Greek serves for both iron and steel; but the description of the qualities of the "iron" of which their instruments were made clearly indicates that it must have been not only steel, but steel of a very high temper; and this idea is confirmed by the excellence of steel produced by the Chinese and even by African natives of the present day, by primitive processes closely akin to those of the ancients.

There is a great deal of difficulty in gathering from the unaided text of classical authors the exact characters of most of the instruments referred to, but by dint of comparing numerous passages in which some characteristic or use of a particular instrument is described with various forms that are still to be seen, Milne has been enabled to arrive at a great degree of accuracy in his identification and description of instruments. The difficulty arises from several causes, the most obvious of which is that, as happens also in the present day, treatises on surgery do not ordinarily go into details about the instruments mentioned, with which the reader is expected to make himself familiar, if he is not already familiar, by actual inspection of the instrument itself and by watching the use of it in the hands of others. A further reason lies in the fact that specific names, in Latin especially, were not very common, a generic term, with qualifying adjectives when needed, being made use of. For instance, the term *scalpellus* does duty for many kinds of knives, of which, as Milne demonstrates, there were certainly seven varieties, viz., straight-bladed knives, cutting on one edge only, and on both edges, each of which might be either sharp pointed or blunt pointed. A similar division is made of knives with curved blades, except that the curved knife cutting on both edges, described by Galen as useful in dissections of the thorax, is of the sharp-pointed variety only. A third reason of the difficulty is to be found in the fact that of many Greek writings the only texts now extant are translations, often themselves from translations, e. g. parts of Soranus, the original Greek of which is lost, as is also the original Latin translation therefrom by Moschion; the now surviving texts being only a Greek translation from the Latin version of Moschion and a Latin rendering from this Greek retranslation.

Of knives there were in use among the Greeks and Romans scalpels and bistouries of various kinds, pterygium knives, uvula and tonsil knives—the latter in pairs, right and left, curved on the flat—shears, fistula knives, lithotomy knives and many others. Of "probes" we hear of bulbous probes, ear and ophthalmic probes, grooved directors, tongue depressors, uterine sounds, uterine dilators (the latter almost the exact prototypes of Hegar's dilators), trachoma and other curettes, and spoons and hooks, sharp and blunt. Among forceps we find uvula, polypus, and epilation forceps, tumor forceps and eyelid fixators. There were bleeding cups, ear and aspirating syringes and clysters—the latter of a form common even up to the nineteenth century and only of late years replaced by the Higginson syringe—insufflators for blowing powders into the throat and nose, and cannulas for ascites and other paracentesis operations; cauteries of many kinds which were used for counterirritation, hemostasis, and as a bloodless knife for destroying tumors; raspatories, chisels, gouges, drills, trephines, bone forceps and elevators, for bone operations; tooth forceps, stump forceps, scalers, and elevators; catheters, male, female and child; bladder sounds; a form of instrument used for lithotrity when the stone was too large for extraction by lithotomy, specula, vaginal and anal; cephalotribes, decapitators and blunt hooks; uterine curettes and pessaries of various kinds; sponges and sponge tents, sutures, serrefines, etc. As to midwifery forceps, Milne is doubtful if the ancients possessed them; for although Francis Adams, commenting on Paul of Ægina, III, 376, asserts that though the Roman and Greek writers do not mention them Avicenna does, and further remarks that a forceps was dug up in the house of an obstetrix at Pompeii, bearing a considerable resemblance to the modern midwifery forceps, Milne concludes, for reasons cogently stated, that the passage in Avicenna refers to the extraction of the dead fetus by the craniotomy forceps; while to the reported find of midwifery forceps at Pompeii, considering the jealous vigilance with which such finds are secured for the museums, he pertinently asks, "Where is that forceps now?"

We gain many interesting sidelights during the perusal of this fascinating work on points that touch us closely in these modern days, of which we may quote two examples. First as to asepsis. The author says: "We must notice the fact that the majority of instruments we know were all of metal, not folding into hollow handles of wood, bone, etc., as the instruments of a decade ago did, so that they were easily cleaned. In fact, we shall see that when the scalpel and handle were not forged in one piece they were united by something very like our aseptic joint. Hippocrates insists on the importance of keeping everything in surgery absolutely clean."

Another passage demonstrates the continuity of human nature, for surely it is not difficult for us to recognize in the following description a weakness still to be found in our ranks: "Lucian satirizes a medical man who sought to conceal his ignorance by a display of a fine library, bleeding cups of silver, and scalpel handles inlaid with gold—the devices of quacks, Lucian says, who did not know how to use the instruments when the necesssity arose."

Medicolegal

Construction of Accident Policy Covering Blood Poisoning Sustained by Physicians or Surgeons Through Wounds.

The United States Circuit Court of Appeals, Eighth Circuit, had, in Fidelity and Casualty Company of New York vs. Thompson, an action brought by the latter party on a policy of insurance "against disability . . . resulting directly, and independently of all other causes, from bodily injuries sustained through external, violent and accidental means," wherein it was declared: "This policy, subject otherwise to all its terms and conditions, covers blood poisoning sustained by physicians or surgeons resulting from septic matter introduced into the system through wounds suffered in professional operations."

There was evidence tending to show that the plaintiff, as stated in the policy, was an operating dentist; that during the life of the policy a patient, on whom he was in the act of professionally operating for affected teeth, suddenly coughed, and thereby particles of septic matter were conveyed from the patient's mouth to the conjunctiva, or mucous membrane, of the plaintiff's eye; that the septic matter infected this membrane and was thus introduced into his system, and that he was in consequence wholly disabled from practicing his profession for a period of ten weeks, and partially disabled for a succeeding period of twenty-six weeks. There was also evidence that he felt the impact of the particles on the surface of the eye, but no evidence that it produced any pain at the time, or abraded, penetrated, broke or bruised the conjunctiva, or that the septic matter was introduced into his system otherwise than through the process of infection, in like manner as if the particles had entered the nose, mouth or throat and had lodged on and infected the mucous membrane thereof.

The defendant company requested the trial court to include the following in its charge to the jury: "You are instructed that, by the terms of the plaintiff's policy of insurance, it is made to cover blood poisoning sustained by a physician or surgeon resulting from septic matter introduced into the system through wounds suffered in professional operations; but you are also instructed that there is no evidence of the plaintiff having received any wound, and he must recover, if at all, on other provisions of the policy." But the court denied the request, and included in the charge the following definition of the word "wound," taken from the Century Dictionary: "In surgery, a solution of the continuity of any of the tissues of the body, involving also the skin and mucous membrane of the part, caused by some external agent, and not the result of disease. In medical jurisprudence, any lesion of the body resulting from external violence, whether accompanied or not by rupture of the skin or mucous membrane—thus differing from the meaning of the word when used in surgery."

Without doubt, the Court of Appeals says, it was essential to a right of recovery under the provision relating to blood poisoning that the septic matter should have been introduced into the system through a wound. What, then, is a wound within the meaning of this provision? No purpose would be served by stating the various meanings ascribed to the word by lexicographers, writers on medical jurisprudence, and judges, for they all recognize that one of its well-recognized meanings —that principally employed in surgery—includes an abrasion, breach or rupture of the skin or mucous membrane, whereby animal venom or virus, or some impure, poisonous or irritating matter, may gain entrance to the underlying tissues and contaminate the blood; and this, as the court thinks, is the sense in which it is employed in this provision. It is there used only in respect to physicians and surgeons when performing professional operations, and then only in respect of a bodily injury through which septic matter may be introduced into the system and result in blood poisoning. Plainly, therefore, it refers to such a wound as removes the protection given to the tissues and blood by the skin and mucous membrane and so permits of the introduction of septic matter capable of poisoning the blood; in other words, it refers to an abrasion, breach or rupture of the natural covering through which the septic matter may gain entrance.

As so employed, it does not embrace such a wound as is described in the latter portion of the definition given in the charge, and does not include the blowing against the eye of that which does not mechanically abrade, break or rupture the conjunctiva, but merely communicates to it an infectious disease by contact with its outer surface. So far as was disclosed by the evidence, the immediate mechanical effect of the particles blown into the plaintiff's eyes was not different from what it would have been if they had consisted of so much pure rain water; they did not wound it, but infected it from the exterior, operating in like manner as do some other species of infecting matter when they come in contact with unbroken skin or mucous membrane of other parts of the body. Indeed, it appeared that the pathogenic germs in what was blown into the eye were chiefly pneumococci, which, if carried into the lungs, produce pneumonia; but it would not be said in such a case that the infection of the lungs was through a wound.

The conclusion is that the instruction requested should have been given, and also that the latter part of the definition given to the word "wound" was rendered inappropriate by the other terms of the provision relating to blood poisoning.

When "Patent Medicines," Etc., Are Intoxicating Liquors.

The Court of Appeals of Georgia holds, in Mason vs. State, that medicinal, toilet and culinary preparations, recognized as such by standard authority (such as the United States Dispensatory) and not reasonably capable of use as intoxicating beverages—e. g., tincture of gentian, paregoric, bay rum, cologne, essence of lemon, wood alcohol—are not ordinarily to be regarded as being within the meaning of the expression "intoxicating liquors," though such articles are liquid, contain alcohol, and may produce intoxication.

But "patent medicines," cordials, bitters, tonics and other articles not recognized by standard authority as being within the class just mentioned are to be regarded as being intoxicating liquors, if they are capable of being used as a beverage and contain such a percentage of alcohol as that, if drunk to excess, they will produce intoxication.

The expression of "intoxicating liquors," as used in statutes, in the absence of other words tending to limit the meaning, may be defined as including any liquid intended for use as a beverage or capable of being so used containing alcohol, obtained either by fermentation or distillation, or both, in such a proportion that it will produce intoxication when taken in such quantities as may practically be drunk.

Liability of Medical Colleges and Eleemosynary Institutions.

The Court of Appeals of Georgia holds, in Medical College of Georgia vs. Rushing, that the Medical College of Georgia is not a public institution of the state because it is designated by law as a branch of the University of Georgia. It says that the state has no interest in the college and exercises no control over it. The college has simply received from the state comparatively small benefactions, for specific purposes. Therefore, the court concludes that the Medical College of Georgia is a private corporation, and that it is liable for the torts or wrongful acts of its agents in the conduct of its business and within the scope of their authority.

Moreover, while the college has been declared by the Supreme Court of Georgia to be a public eleemosynary institution, the Court of Appeals holds that public eleemosynary institutions are liable for the torts of their agents, the same as private business corporations, if they have any property, or are in receipt of any income, not exclusively devoted to public charity, out of which a judgment against them can be satisfied.

The question whether the patient is a charity patient or the institution is paid for his treatment, the court says, does not change the rule of liability, if, under the law, this class of institutions is liable at all. That a private person acting without compensation is in many cases liable for negligence is well settled. Where a hospital holds itself out for the treatment of the sick, whether this treatment is to be given as a gratuity, or is to be paid for, the implication arises that such treatment will be performed in a skilful manner, and such hospital or institution will be liable for unskilful or negligent treatment of the patient.

Again, the court says that, under the acts creating this college it is authorized to educate young men to practice the profession of medicine and surgery; but the hospital connected

with it and managed by it, according to the allegation of the petition, is for the treatment of patients for a compensation. It is, therefore, not entirely a charitable institution, but derives a revenue from its business; and the court does not see why it should not be subject to the same rule of liability for the negligent conduct of its agents as any other private corporation.

Therefore, the court holds that where the college conducts a hospital for the treatment of the sick and injured for compensation, it is liable in damages for the unlawful and unauthorized mutilation of the remains of a patient who died at the hospital; and this would be true whether the college was compensated for the board, lodging and treatment of such patient, or not.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

December 21.

1 The Salicylates in Diagnosis and Treatment. A. Haig, London, England.
2 Antemortem Clinical Conditions and Postmortem Findings in an Irregular Case, with Presentation of Pathologic Specimens. M. A. Cleaves, New York.
3 Epilepsy; General Tuberculosis; Syphilis. J. F. Munson, Sonyea.
4 *High-Frequency Metallic Discharge. A New Treatment; Its Possibilities. F. R. Cook, New York.
5 *Fibroid Tumors of the Uterus and Their Treatment. F. De W. Reese, Cortland, N. Y.
6 *Identity of Visual and Color Sensations. G. H. Talbot, Newtonville, Mass.

4. High Frequency Current.—Cook reports on the use of the high-frequency current discharged from the point of an insulated wire. He has found it useful in enlarged tonsils, especially in the adult; in cutaneous lesions characterized by hyperplasia, e. g, acne, acne rosacea, papilloma, moles; for the removal of scars, in which he considers it superior to the *x*-ray, and in hemorrhoids. He reports eleven illustrative cases.

5. Uterine Fibroids.—Reese considers the etiology of fibroids which he ascribes to irritation of the uterine muscular wall stimulating the growth of muscular fibers that should be stimulated only by pregnancy. He advocates a "knifeless" method of treatment, consisting essentially of nerve sedatives, such as asafetida, valerian, etc., combined with fluid extract of hydrastis in 10 minim doses before meals. Locally, he recommends application of picric acid in glycerin, 3 grains to the dram, or ichthyol and glycerin. This is placed in the vagina twice weekly by means of a tampon. Uterine douches must be stopped. This constitutional and local treatment should begin at or before the time at which Noble regards the operative treatment as on debatable ground, viz., when the fibroid tumor is subperitoneal. He gives the following rules for operating: When the patient has neither the time nor the means to take the knifeless treatment method; if there is severe hemorrhage or signs of cystic or malignant degeneration; if the patient has tumor cachexia with complications; if the tumor continues to grow after a few months' knifeless treatment; if the tumor is submucous. His conclusions are drawn from his last fifty cases of fibroid tumors.

6. Color and Visual Perceptions.—Talbot summarizes his paper as follows: Light is the effect of undulations of the luminiferous ether. Each color of the spectrum is caused by a definite number of undulations or vibrations per second. It is the normal stimulus to the eye. The percipient parts of the eye are the retina and the essential elements for vision are in the layer of rods and cones and the outer nuclear layer. These, like all other bodies, contain molecules and are capable of the same molecular motion or vibration. When they vibrate in unison with certain colors, the sensation of that color is conveyed to the brain, where it is properly interpreted. Visual perceptions are the result of different wave lengths or of diffused colors affecting the granules and the rods and cones and producing more or less rapid vibrations therein. It is the color, rather than form or outline, that enables us to distinguish objects. And, finally, it is color alone that gives us distinct visual impressions.

New York Medical Journal.

December 21.

7 *Nasal Sporozoon (Rhinosporidium kinealyi). J. Wright, New York.
8 *Treatment of Sarcoma by Roentgen Rays. G. E. Pfahler, Philadelphia.
9 *Proteid Incapacity in Infants and Children. H. D. Chapin, New York.
10 The Little Known, Atypical (Unfertilized) Egg of Ascaris Lumbricoides. O. T. Logan, Changteh, Hunan, China.
11 *Recurring Pleural Empyema. J. H. Pryor, Buffalo.
12 Peripheral Spinal Degeneration Revealed Only by Longitudinal Sections of Cord and an Axis Cylinder Stain. S. D. Ludlum, Philadelphia.
13 *Etiology and Treatment of Thrombosis. H. A. Duncan and G. M. Illman, Philadelphia.
14 *Quinin Sulphate. J. Y. Shearer, Sinking Spring, Pa.
15 *Pathology of Icterus Neonatorum. A. Granet, New York.

7. A Nasal Sporozoon.—Wright reports some details of a papillomatous looking growth, removed from the nasal passages by Dr. E. C. Ellett of Memphis. An examination of this growth, made by Dr. William Krauss, caused it to be regarded by that pathologist as clearly a protozoan disease, though he was unable to decide on its exact nature. Reports of growths by Kinealy, Minchin and Fantham, and Beattie, caused Wright to return to the study of the growth, which was sent to him in 1903, with the result that he believes the organism to be the same as that reported by the above named observers as having been noted only in India, all the cases, only four or five in number, being natives of the small state of Cochin, on the west coast, which has given the name to "Cochin leg." Dr. Ellett's case occurred in a farmer who had never been away from the neighborhood of Memphis, Tenn. In all cases observed, the organism has occurred in granulation tissue near the vestibule of the nose, which suggests the conveyance of infection by the finger nails. Very minute white dots stud the tissue, and are seen with a low power to be small spheroid cysts embedded in granulation tissue. He describes in detail, with illustrations, the structure of the cysts, which are regarded as protozoan organisms. There is no evidence of metastasis in any of the cases.

8. Sarcoma.—Pfahler collects a large number of cases of sarcoma treated with the Roentgen rays, together with reports of his own, making a total of 22 cases. He describes the technic and arrives at the following conclusions: 1. Roentgen ray treatment of sarcoma has in the past been confined to inoperable and rapidly recurrent sarcomata. In other words, it has been practically confined to the treatment of hopeless cases, and therefore the results obtained are marvelous. 2. It can be recommended in all inoperable cases, but the more extensive the disease, the less likely are we to obtain a complete recovery. 3. In operable cases, the rays should be used before and after operation. In each case, there should be a consultation between the surgeon and the Roentgenologist. 4. The freedom from recurrence is surely greater than that obtained from any other form of treatment in the same class of hopeless cases. Some of these patients have remained well for from three to four years after cessation of treatment. 5. Finally, much will depend on careful technic and skilful application of the rays.

9. Proteid Incapacity.—Chapin concludes that the class of cases which show actual proteid incapacity is made up of those who are permanently physically unfitted, and those who may be only temporarily unfitted, through digestive disturbance, for digesting proteids. Those in the first class will die. Many of the second class can be saved by mother's milk or by the use of very light fluid diet that remains fluid or soft in the stomach until digestion becomes stronger. In some of these cases the use of vegetable proteid with milk proteid, especially vegetable proteid rich in iron (oat or legume), what he has termed mixed proteid feeding, may cause a general upbuilding, and improved digestion will follow. Whenever there is difficulty with milk proteids in a fairly well-nourished child, mixed proteid feeding, using high proteid gruels with the milks, should be tried, for there may be only proteid idiosyncrasy.

11. Recurring Empyema.—Pryor reports a case and offers the conjecture with regard to the recurrence of the attacks of empyema that microbic life remained latent in a pocket formed in the process of healing and became active under unknown favorable conditions. So far as he can learn, no bacteriologic examination was made of the pus at the time of

the primary attack, and thus the presence of the streptococcus on both occasions as a causative agent can not be established. Whether the time of closure of the external opening has any relation to recurrence it is difficult to say. The fact that years of health expire before a secondary manifestation seems to make the influence doubtful. We are apt to assume that any residual pus will be found at the lower boundary of the pleural cavity and below the site of drainage.

13.—Abstracted in THE JOURNAL, Dec. 14, 1907, page 2032.

14. **Quinin Sulphate.**—Shearer details the evil results of the administration of quinin, and asserts that, according to the dose, quinin acts (1) as a tonic, (2) as a stimulant, (3) as an antipyretic or depressant. The tonic action is accomplished by doses of from half a grain to one or two grains. In doses of from three to five grains every three or four hours the action is distinctly that of a stimulant. As an antipyretic, quinin sulphate should be given in doses of from ten to forty grains. He has repeatedly given from twenty to forty grains. He illustrates his application of these principles in pneumonia, hematuria, convulsions, hemorrhages, gastric ulcer and syphilis.

15. **Icterus Neonatorum.**—Granet believes that both the liver and the disintegration of the maternal erythrocytes are responsible for this peculiar kind of jaundice, which is physiologic. As to the absorption of the surplus of bile pigments which finally causes the jaundice, three possibilities are present: First, as the terminal capillaries which surround the hepatic cells constitute a portal system, the intravascular and perivascular pressure equals zero. If the hepatic cells are overfilled, the pressure within the bile capillaries will be forcibly raised after a time, and the biliary pigments will penetrate into the lymph spaces and reach the general circulation through the thoracic duct. Second, should we assume an increase in the viscidity of the bile due to a state of saturation with biliary pigments, the possibility of temporary plugging of the bile capillaries might be considered. In this case, the chances of absorption of the bile through the lymph spaces are evident. Third, another way of absorption, peculiar to the new-born, is through the ductus venosus, as pointed out by Quincke: The flow of bile into the intestines not being impaired in icterus neonatorum, but rather increased, part of it is reabsorbed, gathered into the portal vein, and partially poured into the vena cava through the ductus venosus, which remains unobstructed during the first few days of extrauterine life.

Boston Medical and Surgical Journal.

December 19.

16 Series of Ninety-one Consecutive Blood Cultures. L. J. Rhea and A. B. Emmons, Boston.
17 Effect of Florida Climate on Acute and Chronic Disease. F. Fremont-Smith, Washington, D. C.
18 *Study of Fifty-one Cases of Debility in Jewish Patients from the Massachusetts General Hospital. H. Morrison, Boston.

18. **"Hebraic Debility."**—Morrison concludes a particularly thoughtful paper on his personal investigation into the environments of fifty-one cases of what is known at the Massachusetts General Hospital as "Hebraic debility" from the frequency of its occurrence among the poorest class of Russian Jews, as follows: 1. Debility is a common condition among Jewish patients coming to the Massachussetts General Hospital; as a rule it is temporary, but it is apt to recur. 2. The prevalent symptoms are pain, constipation, and apprehension. 3. The etiology of these debilitated conditions is to be traced to the peculiar circumstances under which the Jews have lived and still live in eastern Europe. Here in America the economic strain during the early years after arrival is an important factor. 4. Debility is especially common among the Jewish women of the immigrant class, because the economic strain weighs very heavily on them. With them, also, imitation and tradition and the ease with which medical advice can be obtained, are factors to be considered. 5. These debilities are peculiar not to the Jew, but to the abnormal condition under which he has been living. As soon as he is relieved from these conditions his symptoms are not different from those of other races. 6. Finally, in the treatment of the cases considered it is well to bear in mind the importance of the old sentiment, "not the disease only, but also the man."

Texas State Journal of Medicine, San Antonio.

November.

19 Report of a Monstrosity. S. L. S. Smith, San Angelo.
20 Detection and Prevention of Disease in School Life. J. W. Torbett, Marlin.
21 Roentgen Ray Filters. G. D. Bond, Fort Worth.
22 Acute Mastoiditis with Lateral Sinus Thrombosis—Report of Case. W. D. Jones, Dallas.
23 *Comments on Operative Methods for the Relief of Retrodisplacements of the Uterus. J. M. Inge, Denton.
24 Operative Measures for Mammary Cancer. H. C. Scott, Temple.
25 Vesicovaginal Fistula. R. J. Alexander, Waco.

23. **Uterine Retrodisplacements.**—Inge deprecates the custom of operators and instructors of teaching or adhering to a particular method in spite of various complications or conditions found in various cases. Most surgeons lose sight of their duty to the young surgeon and student by seldom emphasizing the fact that in a vast number of retrodisplacements, uncomplicated and giving no trouble, the patients need no operation at all, also that when operation is necessary the dissection required to relieve other conditions should determine largely the best method suited to each particular deformity. He prefers to use the natural structures, the round ligaments, when possible, being secured high up in the pelvic cavity.

New York State Journal of Medicine, New York.

November.

26 *Syphilis in Children. L. Weiss, New York.
27 *Cardiac Dilatation Following Acute Infectious Diseases. J. E. Blake, Brooklyn.
28 Treatment of Lumbar Pott's Disease Complicated by Psoas Abscess. J. M. Berry, Troy.
29 Gynecologic Diseases. W. B. Chase, Brooklyn.
30 Milk Production. J. F. DeVine, Middletown.

26. **Syphilis in Children.**—Weiss states that the number of cases of acquired syphilis in children is insignificant in comparison to the number of cases in which the syphilitic taint has been inherited from the parents. The modes of transmission are threefold: 1. Direct infection of the healthy mother by the diseased father having florid secondary symptoms causing in the mother the same kinds of lesions. The child so conceived usually dies *in utero* and is aborted. 2. Direct transmission of the syphilitic taint through the infected sperm of the father, the mother being healthy. In such cases, the mother may remain well and even the child may escape. The mother may become immune through absorption of toxins elaborated by the fetus (Colles' Law). When the infection is on the part of the mother with a diseased ovule the taint is more disastrous to the child than paternal heredity. This condition is rare. 3. Infection of the fetus when the parents were healthy at the time of impregnation and infection of the mother takes place during pregnancy. By treatment of the parents or by natrual attenuation, viable healthy children may be born and these are immune against the acquisition of syphilis (Profeta's Law). The author draws a composite picture of the syphilitic child or adolescent and discusses epilepsy, progressive paralysis, and locomotor ataxia, in relation to inherited syphilis.

27. **Cardiac Dilatation and Infectious Diseases.**—Blake discusses the causes of cardiac dilatation and divides cases into four principal groups. 1. Cases in which no special cardiac symptoms are noted until the sudden onset of a rapidly fatal cardiac paralysis. 2. Cases in which no special cardiac symptoms are noted until the sudden onset of a dangerous cardiac weakness, followed by eventual death or recovery. 3. Cases in which the loss of muscular power appears to be progressive and the circulation becomes more and more embarrassed until death ensues. 4. Moderate or severe cases which develop more or less rapidly, but which tend to partial or complete recovery. This includes the vast majority of the cases. These groups he further considers in detail. He gives seven cases illustrating the various types and emphasizes the following points: In all toxemias the heart is more or less affected. This is particularly true of the acute infectious diseases. In typhoid, influenza, rheumatism, diphtheria and scarlet fever the heart involvement is frequent and is often out of all proportion to the severity of the original attack. The symptoms of cardiac weakness may develop at any time after the beginning of the attack, but most commonly after convalescence has begun. The first evidence of cardiac involvement is revealed by changes in the first sound heard at the apex and by diminished tension in the arteries. If the loss of

cardiac tone is sufficiently great, dilatation follows. This is characterized by irritability of the heart, softness, weakness, and irregularity, of the pulse. Symptoms of failing circulation depend on the degree of muscular weakness and extent of dilatation. A dilatation outward to one finger's breadth beyond the nipple line is usually recovered from; two fingers' breadth is exceedingly dangerous, and three fingers' breadth is usually fatal. Vomiting in a case of dilatation is usually the precursor of sudden death. All patients with infectious diseases should be carefully watched and appropriate measures taken to reduce the work of the heart to a minimum, prevent strain, and eliminate toxins as rapidly as possible before symptoms of heart failure threaten or are present. In every case of infectious disease the heart should be frequently examined until convalescence is fully established.

Ohio State Medical Journal, Columbus.

November 15.

31 *So-Called Aplastic Anemia and Its Relation to Progressive Pernicious Anemia. W. J. Stone, Toledo.
32 Typhoid Fever; Etiology, Diagnosis and Treatment. A. S. Rudy, Lima.
33 Treatment of Typhoid. J. P. Dewitt, Canton.
34 General Considerations in Anesthesia. R. A. Rice, Columbus.
35 Report of Some Unusual Cases of Syphilis. C. G. Foote, Cleveland.
36 Method of Extracting Thickened and Opaque Capsule After Removal of Cataract. D. W. Greene, Dayton.

31. Aplastic Anemia.—Stone reports a case of so-called aplastic anemia and makes an exhaustive examination of the literature, discussing the theory of aplastic and pernicious anemias. From these he concludes that the course, blood picture and autopsy findings in the aplastic form are decidedly different from those in the pernicious. As to treatment arsenic has been of little avail in the cases reported, and seemed to do positive harm in the author's case. The propriety of administering the heavy metals, mercury and arsenic, in cases either of the aplastic or progressive pernicious type should be questioned when evidences of kidney damage, increasing albuminuria, and epithelial casts make their appearance.

Journal Missouri State Medical Association, St. Louis.

November.

37 *Case of Aneurism of Right Subclavian: Ligature in First Portion; Recovery. H. E. Pearse, Kansas City.
38 *Differential Diagnosis Between Chorea Minor and Tic. W. W. Graves, St. Louis.
39 *Surgical Treatment of Tuberculous Peritonitis. H. C. Dalton, St. Louis.
40 *Plea for the Cross-Eyed Child. J. Green, Jr., St. Louis.
41 *Rupture of the Body of the Uterus During Parturition; Report of Case. N. A. G. Tesson, Kansas City.
42 Concussion of the Brain. I. A. Marshall, Ironton.
43 Medical Ethics. O. B. Hall, Warrensburg.
44 Case of Infantile Paralysis. G. M. Moore, Linn Creek.

37. Subclavian Aneurism.—Pearse reports a case of aneurism of the subclavian external to the vertebral artery, but extending inward in fusiform shape beyond the scalenus anticus The thyroid axis had fused into the sac and its separate branches had to be tied and cut. The aneurismal sac was cut away; the operation, which had many difficulties, occupied three hours and ten minutes, and was entirely successful, the patient, a locomotive engineer being now at work again and able to handle his engine as well as ever. Pearse believes the collateral circulation to have been established as follows: 1. Above: The blood of the ligated vertebral artery is soon replaced by anastomosis with its fellow of the left and by anastomosis with the thyroid axis on the left. 2. The anastomoses of the ligated thyroid axis are maintained and blood is passed to the branches of the axillary. Below: The intercostal arteries anastomose with the superior thoracic, long thoracic and subscapular. Other small channels about the shoulder in a healthy well developed subject are also available.

38.—This article was published in the *Medical Record* Aug. 24, 1907 and abstracted in THE JOURNAL Sept. 7, 1907, page 876.

39. Tuberculous Peritonitis.—Dalton briefly discusses the history and literature of the subject. In his experience it is not always possible to make a diagnosis. But when the abdomen has been opened the picture presented points clearly to the source of the disease. To avoid damage to the bowel, the best plan is to keep as close to the parietal or pelvic peritoneum as possible while exposing the affected region. It may be possible to evacuate a tuberculous mass and to apply iodoform emulsion in glycerin to the diseased area, and then to close the abdomen without drainage. Simple evacuation of the fluid, excision of the primary focus when possible, and closure of the abdomen without drainage will yield the best results. He reports four cases.

40. This article was published in the *Interstate Medical Journal*, November, 1907, and abstracted in THE JOURNAL, Dec. 7, 1907, page 1953.

41. Rupture of Uterus.—Tesson discusses the origin, symptoms and treatment of intraperitoneal rupture of the uterus, with report of a case, and says that in suspicious cases the diagnosis may be easily and safely made by inserting a well-cleaned hand or finger into the uterus and examining its walls. He feels that the physician who hesitates to clean his hand as best he can in obstetrical cases and insert it into the uterus, is not doing justice to himself or to his patient.

Medical Fortnightly, St. Louis.

December 10.

45 *Atresia of Vagina; Femoral Hernia of Bladder. W. S. Wiatt, St. Louis.
46 The Circulatory System. M. P. Overholzer, Harrisonville, Mo.
47 *What You Can Not Do with Purgatives. E. Walter, Evansville, Ind.
48 *Education of Physicians and the Public Regarding Insanity. F. P. Norbury, Jacksonville, Ill.

45. Atresia Vaginæ and Femoral Bladder Hernia.—Wiatt reports a case of atresia of the vagina which leads him to the conclusion that when menstrual molimina concur in a virgin with a history of amenorrhea, the physician is justified in a bimanual examination under anesthesia. He also reports a case of femoral hernia of the bladder, deducing therefrom the conclusions that in operations for the radical cure of hernia, or for strangulated hernia, a sterile urethral sound should always be ready for exploration and identification of the bladder. If after a hernial sac has been opened and its contents returned to the abdomen a second sac appears within the first, or to the inner side of it, it is not to be opened until a sound has been passed into the bladder and it has been positively identified. Any hernial sac which is unusually thick and covered by an unusual amount of fat should warn the operator of the possibility of a hernia of the bladder.

47. Abstracted in THE JOURNAL, Nov. 2, 1907, page 1552. It was published also in the *Lancet Clinic*, Nov. 16, 1907 and elsewhere, and will not be listed again.

48. Abstracted in THE JOURNAL, Oct. 19, 1907, page 1391.

American Medicine, Philadelphia.

November.

49 *Modern Tendencies in Treatment of Bone Tuberculosis. H. A. Wilson, Philadelphia.
50 *What Health Departments Can Do to Secure Pure Milk by Inspection of Dairies and Farms. T. Darlington, New York.
51 Stasis Hyperemia or Bier Treatment of Acute Inflammations and Septic Wounds of the Extremities. W. P. McIntosh, Portland, Me.
52 Personal Experiences with Frontal Sinus Disease. R. H. Johnston, Baltimore.
53 *What Health Departments Can Do to Secure Pure Milk by the Permit and License System. E. Wende, Buffalo.
54 Cataract Operation. F. D. Skeel, New York.
55 Surgery of Appendicitis. W. Dow, Regina, Canada.
56 *Is the Vital Principle Ponderable? A. O'Malley, Philadelphia.

49. Bone Tuberculosis.—Wilson reviews the changes that have occurred from the time of Pott in the treatment of tuberculosis of bones and joints, and incidentally deals with Bier's hyperemia, Lorenz's functional ankylosis method, and Wright's research into the possibilities of serum therapy as applied to bone tuberculosis. The first has been widely accepted, the second Wilson considers has not yet been given sufficiently clear data to prove its value or its necessity. With regard to the third, it seems worthy of trial at the hands of those competent by training to use it, but, in the absence of sufficient practical trial, opinion as to its value can not yet be expressed. The net results of the method of treatment of the past twenty-five years is the drawing of special attention to prophylaxis, the critical and careful study of signs and symptoms in the early stage, particularly such trivial things as so-called growing pains, rheumatics, etc.

50. **Milk Inspection.**—Darlington describes what has been done by the health department of the city of New York in the regulation of the milk supply and recapitulates the conclusions of the commission appointed by Mayor McClellan to study and report on the best methods of milk inspection and control, in brief, as follows: 1. Uncontaminated milk from a healthy cow is always wholesome. 2. The danger of transmitting tuberculosis through milk is slight in the absence of considerable udder disease. Systematic inspection and condemnation of cows revealing tuberculosis on physical examination is recommended. 3. The education of the farmers in this matter is insisted on

53. **Pure Milk.**—Wende says it must be accepted that milk is a source of transmission of bovine tuberculosis, particularly in early life. He grades dairies into three classes and describes the handling of the milk from its source to the consumer. He criticises the state supervision and describes the methods of the health board of Buffalo. He demands a stricter supervision and control by the state; a dairy standard and a license and permit system; the evolution of the standard grade large individual ice producer and the extinction of the small menacing contributor; the dairy to be a preparer and not a mere producer: the adoption of refrigerator cars and cooling chests; the city milk dealer to be a contributor not a manipulator; abolition of milk cans and adoption of single service paper containers for direct consumption from udder to mouth. The container can be made an educator by labeling it with pertinent facts.

56. **The Vital Principle.**—O'Malley examines critically the hypothesis of Duncan MacDougall concerning "soul substance," and his experiments of weighing the body at the moment of death, with the conclusions drawn therefrom. Those given to the study of medical metaphysics will read this article with interest.

Archives of Pediatrics, New York.

November.

57 Nervous Anorexia in Children. F. Forchheimer, Cincinnati.
58 Congenital Stenosis of Duodenum. H. L. K. Shaw and L. K. Baldauf, Albany, N. Y.
59 Report of Case of Amyloid Disease. H. C. Carpenter, Philadelphia.
60 Maternal Impressions, with Report of Case. J. T. Rugh, Philadelphia.
61 Indications for and Technic of Paracentesis of Drum Membrane. J. McCoy, New York.
61½ Hemorrhagic Typhoid, with Report of Two Cases Occurring in Children. W. W. Woodward, Philadelphia.

Washington Medical Annals, Washington, D. C.

November.

62 *Operative Treatment of Deflections of the Nasal Septum. C. W. Richardson, Washington.
63 Cases of Unusual Fractures of Bone. W. P. Carr, Washington.
64 Cases of Unusual Urinary Calculi. W. P. Carr, Washington.
65 *Influence of the Gonococcus in the Causation of Sterility. J. T. Johnson, Washington.
66 Case of Amebic Dysentery with Abscess of Liver. D. S. Lamb, Washington.
67 *Functional Disturbances of the Nervous System Due to Gastroenterogenous Poisons. P. S. Roy, Washington.
68 Case of Endotheliomatous Cyst of Greater Omentum. E. M. Hasbrouck, Washington.
69 Case of Congenital (?) Hypertrophy of Pylorus. B. G. Pool, Washington.
70 Case of Viavi Treatment. D. S. Lamb, Washington.
71 Prevention of Death During Anesthesia by Chloroform and Ether. R. Reyburn, Washington.
72 Tuberculosis of the Placenta. E. E. Morse, Washington.
73 Case of Sarcoma of Cerebellum. R. S. Lamb, Washington.

62. **Deflections of the Nasal Septum.**—As a result of comparative observations, Richardson contrasts the results of the old method of dealing with deflections of the nasal septum and those attained by the submucous operation, as follows: The old method gives, after the operation, a septum maintaining its anatomic integrity; the submucous operation gives a flaccid septum, minus certain elements considered formerly essential to its anatomic integrity. The operation by the old method requires about five minutes in its consummation; the submucous operation requires from one-half to one hour in actual operating time. The old method requires the wearing of a splint for a week or ten days; the packing in the submucous operation is removed in twenty-four hours. In the old method there is considerable pain and discomfort until the splint is removed; there is no pain after the submucous. In the old method of operating the patient is confined to bed for one week and is uncomfortable and feverish until the splint is removed; the submucous patient is out of bed at the end of twenty-four hours and at the end of forty-eight hours is practically well. The old method is rarely attended with perforation—Richardson has had only two in his whole experience. Theoretically, the submucous method should be attended with like results—practically perforations do occur. Richardson feels himself becoming a strong advocate of the submucous operation, because it gives less discomfort to the patient, taxes the skill of the operator, and when satisfactorily done gives most delightful results.

65. **The Gonococcus.**—Johnson emphasizes the importance and wide spread influence of the gonococcus as a factor in disease, and particularly in sterility. Instead of its being the woman that was at fault in nine cases out of ten of childless marriage, as was formerly believed, it is probable that the man is at fault in far the larger proportion of cases. Gonorrhea is responsible for most salpingitis and for the specific endometritis. Moreover, according to Jacobi and Currier, the vulvovaginitis of little girls, which is generally of gonorrheal origin, has the effect of retarding or altogether preventing the normal development of the uterus and its appendages. Large numbers of women, too, live lives of chronic invalidism, too frequently as the result of chronic gonococcic infection. Johnson suggests the inauguration of a campaign of education by the medical profession and urges that the sanction to marriage should be refused to all known to have been recently infected until the use of modern methods of diagnosis has proved the absence of specific germs.

67. **Gastroenterogenous Poisoning.**—Roy discusses the natural means of the organism for combating toxic conditions and then gives a résumé of our knowledge of some of the intestinal poisons, namely, indol, hydrogen sulphid, nitrates, the acetone bodies, and ammonia.

New Orleans Medical and Surgical Journal.

November.

74 *Bacteria Carried on Appendages of the Domestic Fly. E. P. A. Ficklen, New Orleans.
75 Chlorosis: Its Diagnosis and Treatment. I. I. Lemann, New Orleans.
76 Peripheral Nerve Injuries: Their Prognosis and Treatment. R. M. Van Wart. New Orleans.
77 Practical View of Bacteriology for the Physician. J. D. Weis. New Orleans.
78 Cases of Achylia Gastrica. S. K. Simon, New Orleans.
79 Case of Metol Poisoning or Intoxication. H. D. King, New Orleans.
80 Fractures. E. D. Martin, New Orleans.
81 Gangrene of the Foot Following Influenza. C. W. Allen, New Orleans.
82 Chyluria. C. W. Allen, New Orleans.

74. **Bacteria in Flies.**—Ficklen discusses the relation of flies to disease from a historical standpoint and gives a description of the house fly, deducing that infection by means of flies can take place only in the following ways: 1, direct normal contact; 2, intravenous or subcutaneous infection through an abrasion, etc.; 3, indirect infection by the pollution of food. He describes the bacterial flora of the house fly and reports a series of experiments with flies allowed to feed on anthrax, hog cholera, and typhoid, the flies subsequently affording pure cultures of the respective organisms. His studies emphasize the importance of taking stringent measures for the eradication of flies during times of widespread sickness. Particularly must all stables and cattle sheds be strictly supervised and the manure rendered uninhabitable to the eggs and larvæ of the fly, for which purpose he recommends spraying with a strong solution of bichlorid of mercury. He points out the necessity for a competent corps of inspectors, for "sanitation" has no meaning to the class of people who should practice it most. The average dairyman or stable owner thinks of carrying out only the letter, not the spirit, of the law, yet these men carry the welfare of the community in their hands.

St. Louis Medical Review.

November.

83 *Treatment of Malaria. C. Paine, Peoria, Ill.
84 *Treatment of Inoperable Carcinoma of the Uterus by Acetone. G. Gellhorn, St. Louis.
85 Opsonin and Vaccine. G. McConnell, St. Louis.
86 Surgery of the Ureter. B. M. Ricketts, Cincinnati, Ohio.

83. **Malaria.**—Paine considers the treatment of malaria exhaustively, both as regards the intermittent and remittent

forms, and also pernicious malaria. With regard to the intermittent form he says that a hypodermic injection of morphin sulphate ¼ grain, and atropin sulphate 1/150 grain will markedly modify the severity of the chill if administered before it is due. He considers the administration of quinin by the mouth, by hypodermic and intravenous injection by hypodermoclysis by rectal enemata and suppository and by inunction. With regard to its administration by mouth he has found its therapeutic action remarkably aided by the addition of from one-quater to one-half of a grain of powdered capsicum or one or two grains of powdered ginger. He considers the use of salts of cinchona, salicin, methylene blue, Warburg's tincture, arsenic, opium, and eucalyptus, describes the treatment of an average case with the after-treatment and also the treatment in infants and children and in latent and masked forms of malaria.

84. **Carcinoma of the Uterus.**—Gellhorn writes a report on the treatment of inoperable carcinoma of the uterus by means of acetone, supplemental to a paper in THE JOURNAL, April 27, 1907, which covered the same ground.

Chicago Medical Recorder.

November 15.

87 *Preliminary Report on Ten Cases of Chronic Joint Disease Treated by Tuberculin Injections by Wright's Method. J. Ridlon, Chicago.
88 Unusual Case of Mixed Infection of Right Upper Extremity. E. H. Ochsner, Chicago
89 *Painless Removal of Adenoids and Tonsils. H. Gradle, Chicago.
90 Dilated Veinlets on External Nose and Septum: Permanent Closure with Positive Galvanic Needle. O. T. Freer, Chicago.
91 Relationship of Druggists and Physicians. H. B. Hemmenway, Evanston, Ill.

87. **Chronic Joint Disease.**—Ridlon reports on ten cases of chronic joint disease treated after Wright's method with tuberculin. His conclusions are as follows: A low tuberculo-opsonic index with local joint symptoms may be accepted as evidence of joint tuberculosis. But the practically normal tuberculo-opsonic index together with local joint symptoms neither proves nor disproves joint tuberculosis. When the diagnosis of joint tuberculosis has been made a high tuberculo-opsonic index should be maintained, if possible. With a high tuberculo-opsonic index, an operation for the removal of all or part of the local disease may be undertaken. Not so with a low index. If use of the diseased joint lowers the opsonic index the joint must be protected; if it does not lower the index it may be permitted; if it raises the index it should be insisted on. General elevation of the temperature following an injection includes too large a dose. A persistent lowering of the index during treatment indicates that the injection has been given at the wrong time, during what Wright calls the negative phase, instead of during the positive phase. He believes the joint injection treatment guided by the tuberculo-opsonic index to be a most promising step in advance in the treatment of tuberculous joint disease.

89. **Painless Removal of Adenoids.**—Gradle thrusts into the posterior wall of the pharynx, as high as possible after elevating the soft palate with a soft hook, a hypodermic needle, 10 c.c. long, after spraying with cocain, and injects a mixture of cocain and adrenalin. The needle is introduced through a blunt cannula as a guide. After ten minutes the operation will be painless. For the tonsils, if the child is submissive, about ten drops of a 1 per cent. or even 0.5 per cent., solution of cocain with adrenalin (1 to 4000) is injected all around the periphery of the tonsil, and produces complete insensibility. Pain, however, is felt when strong traction is made, especially with the snare.

Surgery, Gynecology and Obstetrics, Chicago.

November.

92 *New Operation for Cure of Salivary Fistula. C. S. Hamilton, Columbus, Ohio.
93 *Deferred Operation for Ruptured Ectopic Gestation. F. F Simpson, Pittsburg.
94 *Metastatic Carcinoma of Tube and Ovary in Cancer of Cervix. F. J. Taussig, St. Louis.
95 *Enuresis in the Female Due to Phimosis. G. E. McGirk, Philipsburg, Pa.
96 *Chronic Suppurative Processes in Hand. A Clinical, Experimental and Anatomic Study. A. B. Kanavel, Chicago.
97 *Cancer of Thyroid, with Report of Three Cases. A. E. Halstead, Chicago.
98 Technic of Supravaginal Abdominal Hysterectomy. T. J. Watkins, Chicago.
99 Case of Cicatricial Contraction Following Burn, with Relief by Wolfegraft. J. S. Davis, Baltimore.
100 Technic of Removal of Tuberculous Glands of Neck. S. C. Plummer, Chicago.
101 *Surgical Treatment of Puerperal Fever. W. J. Sinclair, Manchester, England.

92. **Salivary Fistula.**—Hamilton describes the details of a new operation for fistula of Stenson's duct, consisting essentially in an elliptical incision around the fistulous orifice on the cheek, and transplantation of the orifice to the buccal mucosa, where it is fixed by appropriate sutures. This method is not practicable if the fistula is located so far posteriorly that the proximal portion of the duct is not long enough for transplantation.

93. **Ruptured Ectopic Gestation.**—Simpson considers the question of immediate operation for ruptured ectopic pregnancy and combats the idea that the larger percentage of those who sustain a ruptured ectopic gestation will almost inevitably bleed to death, which is the commonly urged reason for immediate operation. He contends that operation should not be done unless all conditions are favorable for a successful issue.

94.—Abstracted in THE JOURNAL, May 18, 1907, page 1707.

95. **Enuresis Due to Female Phimosis.**—McGirk discusses the anatomy and the nerve supply, direct and reflex, of the female genitalia, and recommends that an examination of the clitoris should be a routine practice in all gynecologic cases as well as in children who habitually handle the parts. He reports cases of enuresis in both children and adults successfully treated by circumcision, and describes the operation.

96. **Suppuration of the Hand.**—Kanavel, in an exhaustive clinical, experimental and anatomic study, admirably illustrated, goes at great length into various forms of suppuration of the hand and offers the following résumé: Necrosis of the distal phalanx ordinarily ends in sloughing of the diaphysis alone. Joint function should be preserved. Incision should be made laterally instead of on the palmar surface. The proximal interphalangeal joint is most commonly involved. The proximal phalanx escapes while the epiphysis and part of the diaphysis of the middle phalanx are destroyed. Conservative operations may be done with some success. Isolated involvement of the tendon sheaths may be present. Incision of the sheath should expose all involved parts. Chronic palmar abscesses frequently point on the dorsum passing along the lumbrical canals, and may be opened along these canals. Complete function can be promised patients suffering with palmar abscesses uncomplicated by tendon-sheath or osseous infection. Chronic dorsal abscesses may point at a distance from the focus owing to the dorsal aponeurotic sheet. The carpal joints are frequently invaded from the radial bursa, abscesses and sinuses appear on the dorsum. Every effort should be made to preserve the integrity of the tissue between the first and second row of carpal bones. Serious forearm abscesses lie below the flexor profundus digitorum and may be opened either in front in connection with an incision in the palm or in isolated cases by lateral drainage. Trophic changes result from the tendency of the pus to extend along the nerves and blood vessels.

97. **Cancer of Thyroid.**—Halstead records three cases, and dwells on the etiology, pathology, clinical course, symptomatology and diagnosis.

101. **Puerperal Fever.**—Sinclair, in his contribution to the Nicholas Senn Festschrift, discusses at length the history of puerperal fever, describes the theoretic basis of efficient treatment and concludes that the mischievous meddlesomeness must cease, and operation must be resorted to only on clear indications for interference. When symptoms indicating infection set in, action must be prompt and unhesitating. The distinction between puerperal sapremia and septicemia must be abandoned, and as a corollary we must abandon the weakness in action and the procrastination depending on the distinction. When symptoms suggesting puerperal peritonitis appear, and when after exact, watchful observation a presumptive diagnosis is reached, prompt operation is demanded. Operation in the future will save many unhappy women, such as we in the present permit to perish by inaction.

Louisville Monthly Journal of Medicine and Surgery.

November.

102 *Relations Between the Medical Profession and the People. H. H. Grant, Louisville.
103 *The Kentucky State Medical Association: Its Needs, Organization and Ambition. D. M. Griffiths, Owensboro.

102.—Abstracted in THE JOURNAL, Nov. 16, 1907, page 1707.

103.—Abstracted in THE JOURNAL, Oct. 26, 1907, page 1465.

Virginia Medical Semi-Monthly, Richmond.

November 8.

104 Value of Elimination in Treatment of Certain Forms of Epilepsy. J. A. Hodges, Richmond.
105 Establishment of Sanatoria in Florida Through State Aid, for the Treatment of Incipient Tuberculosis. E. N. Liell, Jacksonville, Fla.
106 Tabes. B. R. Tucker, Richmond.

November 22.

107 Report of Cases of Unusual Derangement of Knee Joint. A. R. Shands, Washington, D. C.
108 Intubation. P. D. Lipscomb, Richmond.
109 *The Age in which We Live. C. Pope, Louisville, Ky.
110 *What You Can Not Do with Purgatives. E. Walker, Evansville, Ind.
111 Principles of Surgery. S. McGuire, Richmond.

109.—Published in the *Lancet-Clinic*, Nov. 16, 1907.

110.—Published in the *Lancet-Clinic* Nov. 16, 1907, *Virginia Medical Semi-Monthly*, Nov. 22, 1907, and in the *Medical Fortnightly*, Dec. 10, 1907. Abstracted in THE JOURNAL, Nov. 2, 1907, page 1552.

Vermont Medical Monthly, Burlington.

November 15.

112 *Uterine Cancer in Vermont. C. W. Strobell, Rutland.
113 *Autointoxication. H. C. Jackson, Woodstock.
114 *Practice of Medicine as a Business. J. F. Blanchard, Newport.

112.—Abstracted in THE JOURNAL, Nov. 30, 1907, page 1868.

113.—Abstracted in THE JOURNAL, Dec. 7, 1907, page 1948.

114.—Abstracted in THE JOURNAL, Dec. 7, 1907, page, 1949.

University of Pennsylvania Medical Bulletin, Philadelphia.

November.

115 Investigation of Physical, Chemical and Biologic Condition of the Air in the Philadelphia Rapid Transit Subway. H. L. Bates, Philadelphia.
116 Distribution of Motor Root in Anterior Horn. A. R. Allen, Philadelphia.
117 Regeneration of Bone. (Concluded.) H. S. Wieder, Philadelphia.

Denver Medical Times and Utah Medical Journal, Denver.

November.

118 Emphysema of Orbit and Lids Following Removal of Middle Turbinal. E. W. Stevens, Denver.
119 Palpation: Aid to Diagnosis of Surgical Diseases. C. C. Allison, Omaha, Neb.
120 Nevada: Its Opportunities for Medical Men. F. E. Waxham, Denver.
121 Ileocolic Circle. B. Robinson, Chicago.
122 Subphrenic Abscess Following Pneumonia. P. J. Pothuisje, Denver.
123 Laboratory Diagnosis for the Practitioner. J. C. Todd, Denver.
124 Complications of Rheumatism. I. B. Laker, Eureka, Utah.
125 Diagnosis and Treatment of Osteomyelitis. J. W. Aird, Provo, Utah.
126 Veratrin. R. J. Smith, Schenectady, N. Y.

Montreal Medical Journal.

November.

127 Hygienic and Dietetic Treatment of Pulmonary Tuberculosis. H. M. Kinghorn, Saranac Lake, N. Y.
128 Listerism—Antisepsis and Asepsis. A. H. Wright, Toronto.
129 Accidents in Thoracentesis. W. F. Hamilton, Montreal.
130 Epidemic Cerebrospinal Meningitis. J. J. MacKenzie, Toronto.
131 Treatment of Cerebrospinal Meningitis. A. D. Blackader, Montreal.
132 Primary Melanosis of Palate: Nasobuccal Fistula of Recent Sarcomatous Origin. J. N. Roy, Montreal.

Northwestern Lancet, Minneapolis.

November.

133 Contact Typhoid. H. W. Hill, Minneapolis.
134 Wien Nasen Pot-Pourri. W. S. Wood, Albert Lea, Minn.
135 Preventive Medicine. A. L. Baker, Kasson, Minn.
136 Punctured Wounds, with Report of Case. W. E. Moore, Tyndall, S. Dak.

Indiana Medical Journal, Indianapolis.

November.

137 Tuberculosis: A Historical Sketch. J. Stewart, Anderson.
138 Report on Tuberculosis. T. Potter, Indianapolis.

West Virginia Medical Journal, Wheeling, W. Va.

November.

139 Examination of Blood. J. W. Moore, Charleston.
140 Treatment of Alcoholic and Other Narcotic Drug Habitués G. H. Benton, Chester.
141 Proprietary Medicines. G. D. Lind, New Richmond.
142 Appendicitis from Standpoint of General Practitioner. J. W. Preston, Keystone.
143 Mastitis. H. K. Owen, Elkins.
144 Rapid Method of Staining Spirochæta Pallida. W. J. MacNeal, Morgantown.

Western Medical Review, Omaha.

November.

145 Treatment of Colds and Influenza. D. T. Quigley, North Platte, Neb.
146 Late Work in Laryngology and Rhinology. H. B. Lemere, Omaha.
147 *Treatment of Puerperal Sepsis. C. Rosewater, Omaha.
148 Psychologic Suggestion as a Remedy for Disease. A. E. Clough, Madison, S. Dak.
149 Appendicitis Complicating the Puerperium. D. C. Hilton, Lincoln, Neb.

147.—Abstracted in THE JOURNAL, June 8, 1907, page 1982.

American Journal of Surgery, New York.

November.

150 Treatment of Infantile Paralysis. R. W. Lovett, Boston.
151 Surgical Treatment of Cancer. W. S. Bainbridge, New York.
152 *Frequent Interdependence of Dislocated Kidney, Gall-Bladder Trouble and Appendicitis. E. Harlan, Cincinnati.
153 Skiagraph as Aid in Diagnosis of Tuberculous Bone Lesions. A. Jacoby, New Orleans.
154 Blood Examination in Surgical Diagnosis. I. S. Wile, New York.
155 Gonorrhea in the Female Genital Tract. D. W. Roose, Manistique, Mich.

152.—This article was published in the *Medical Fortnightly*, Oct. 10, 1907, and was abstracted in THE JOURNAL, Oct. 26, 1907, page 1467.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

December 7.

1 Wounds and Injuries of the Eyeball, Eyelid and Orbit. S. Snell.
2 Scientific Use of Evidence in Surgical Practice. H. Marsh.
3 *Unexplained Fever in Infants and Children. H. Ashby.
4 *Urinary Mucous Tract and Not the Blood Stream, as Route of Invasion by Pathogenic Organisms Under Certain Conditions. C. J. Bond.
5 Unusual Motor Car Accident. G. Beatson.
6 *Ocular Reaction to Tuberculin. W. MacLennan.
7 *One Hundred and Twenty-one Cases Tested with Calmette's Tuberculin. J. S. Webster and J. A. Kilpatrick.
8 Case of Achondroplasia. J. A. C. Macewen.
9 Child with Multiple Deformities. E. Jepson.
10 *Tuberculin Ocular Reaction. H. Downes.
11 Case of Myositis Ossificans. E. J. Maxwell.
12 Use of the Seton. E. Pratt.
13 Poisoning by Bromoform. J. A. Langdon.

3. **Unexplained Fever.**—Ashby discusses various forms of fever occurring in infants and children, in which the usual causes of fever—infectious diseases, tuberculosis, influenza, meningitis, otitis, and "teething"—are excluded, on the basis that fever is due either to the presence in the blood of some bacterial toxin or to reflex or vasomotor causes. Gastrointestinal infection is of course one of the commonest causes, and he particularly emphasizes the number of opportunities the young child has of gastrointestinal infection—crawling about on the floor, putting everything into its mouth, "comforters" given it to suck, overmuch kissing, and dangers connected with its food and feeding bottle. He describes instances and refers especially to infantile pyelitis as a cause likely to be overlooked, if not altogether, at least for a long time. From the fact that nearly all the sufferers in the latter form are girls, he concludes that the infection is frequently by way of the urethra. It is necessary in such cases to call in the aid of a bacteriologist, especially if the urine is strongly acid. Among other causes he names a small patch of pneumonia, local empyema, cerebrospinal meningitis, influenza, septicemia from absorption by the tonsils or nasopharynx, a boil, etc. All these cases demand bacteriological aid, as well as investigation of the blood, urine, and cerebrospinal fluid. Of another class are the type often spoken of as "bilious attacks" and the nerve storms, "or in other words, epilepsy." Some feverish states are plainly due to gastric insufficiency with or without chronic intestinal catarrh. An examination shows a dilated stomach, or one which is in a chronic condition of diastole, with decomposing contents and a constant evolution of gas. Similar

symptoms may be produced by intestinal dyspepsia. In cases of the neurotic type, clever children who must be doing something and who get a rise of temperature whenever they become fatigued, when all the possible causes, including worms, have been excluded, the wise practitioner sends the child into the country, accidentally breaks the family thermometer, and supplies another which can not be made to rise above 99. Neurotic children, dyspeptic ones, and even some with a batch of tuberculous glands somewhere out of sight and touch, are best away from the observation of the anxiety their ailments give their friends, and leading a healthy outdoor life.

4. Pathogenic Organisms and the Urinary Tract.—Bond points to a class of cases clinically reproducing the features usually associated with pyelitis, without any history of calculus, instrumentation, or injury to the urethra or bladder, gonorrhea or stricture. It has been usual to ascribe such cases to a blood infection, say with *Bacillus coli*, which is excreted through the kidneys, thus giving rise to the symptoms. The following facts seem to throw light on the real method of infection: 1. The majority of cases occur in the female, and the pregnant state or gynecologic condition appears to be the predisposing cause. Campbell has shown bacterial infection of the urethra to be frequent in gynecologic cases, and in pregnancy Rebland and Cumston have drawn attention to pyelonephritis as a complication of pregnancy, and Lohlein and Olshausen have pointed out that the ureters are found dilated in women dying in labor. The pressure of the uterus on the ureter at the pelvic brim during pregnancy, Cumston thinks may cause obstruction leading to partial hydronephrosis, and he suggests that virulent organisms find their way into the blood stream and so infect the kidneys in their state of lessened resistance. Bond points out that in the address in surgery before the British Medical Association, in 1905, he demonstrated that under certain circumstances a regurgitant mucous stream does occur in the genitourinary tract, capable of conveying foreign particles, such as indigo, along the whole length of the tract from the anterior urethra to the upper end of the ureter. This condition demands, however, as a predisposing factor, some temporary arrest, partial or complete, in the normal outgoing flow of the natural secretion. He then records three cases of his own in which there were distinct symptoms at the beginning of a nephritic attack, of a definite cystitis, transitory in character, but definitely preceding the kidney symptoms. Putting together the clinical, bacteriologic and experimental facts, he says that it is impossible to resist the conclusion that the infection, whatever the organism may be, enters the body by way of the mucous canal of the urethra, spreads thence to the bladder, and is carried upward along the ureters to the pelvis of the kidneys. He recounts the objections against the blood-stream theory of infection, and thinks that this theory of duct infection may be extended to other affections besides those caused by the pus-forming organisms, e. g., tuberculosis of the testis, fistula-in-ano. This view is in harmony with the observed phenomena of toxic processes. It is important, then, to safeguard the orifices of the mucous canals by attention to bathing and personal hygiene. Possibilities of treatment are also opened out.

6. Ocular Reaction to Tuberculin.—MacLennan has made over a hundred observations, 70 with Calmette tuberculin, 25 with the "old" and 10 with the "new" tuberculin. The analysis of his cases brings out these facts: 1. For the most part Calmette's claims are fully justified. 2. The test apparently reveals the presence of tuberculous lesions that are benign and unsuspected from a clinical point of view, as well as those that are more obvious. 3. In those cases in which a subcutaneous injection of old tuberculin has given a positive or a negative reaction the same result has followed the application of the ocular test. 4. There seems some evidence that a solution of the old tuberculin may answer equally well. If further experience proves the test reliable, it will be a valuable aid in the early diagnosis of tuberculosis in obscure cases.

7. Calmette's Tuberculin Reaction.—Webster and Kilpatrick found that all definite cases with bacilli in the sputum gave the reaction. In doubtful cases some gave it, some did not. In presumably healthy individuals two gave the reaction and two did not, but no conclusion can be drawn in the absence of clinical examination. No conclusions can be drawn as to the relation of the reaction to the extent of the lesion. The reaction gives some promise of utility, but its reliability can only be ascertained after much more extended experiment.

10. Id.—Downes' 24 cases add their testimony to the view that the reaction is valuable but not infallible. He suggests that it would be useful to learn the value of the test in the so-called pretuberculous stage of the disease. He warns against giving undue importance to it, as has been done with regard to tubercle bacilli in the sputum.

Lancet, London.

December 7.

14 *Treatment of Dysentery. F. M. Sandwith.
15 *Contributions from History and Literature to the Study of Precocity in Children. G. Guthrie.
16 Cases of Myomata of Uterus Presenting Unusual Features and Calling for Urgent Surgical Interference. W. F. Brook.
17 Case Showing Division of Clavicles Into Two Halves, with Other Bony Deformities; Cleido-cranial Dysostosis. E. I. Spriggs.
18 *Plea for Uniformity of Conditions in Vaccination. A. H. Gerrard.
19 Pulmonary Regurgitation Due to Vegetative Endocarditis Consequent on Rupture of Aneurism of Heart. T. Oliver.
20 *Treatment of Trigeminal Neuralgia by Injection of Osmic Acid Into the Gasserian Ganglion. G. A. Wright.
21 Outbreak of Food Poisoning Due to Eating Brawn. G. F. Buchan.
22 *Acute Pulmonary Edema. L. Williams.
23 Carcinoma of Ovary Occurring in Child Aged Seven. E. W. Parry.
24 Unusual Case of Appendicitis. A. K. Gordon.
25 Case of Rheumatic Hyperpyrexia in Child Aged Six. G. H. Lock.

14. Dysentery.—Sandwith points out that even in countries where dysentery is not indigenous there is a danger from its importation by carriers, cases not recognized or diagnosed as diarrhea or so mild that they do not seek treatment. These individuals, however, are capable of transmitting the disease, which may take a virulent type with the person infected. Sandwith discusses bacillary and amebic dysentery. The diagnosis is not difficult to those who have trained themselves to examine the excreta. Tenesmus exists only when the lower rectum is affected. The diseases most often confounded with dysentery are carcinoma, polypi and syphilis of the rectum, hemorrhoids, and in those returning from the tropics bilharziasis. The following points should be remembered in the differentiation of the two forms: 1. Amebic dysentery, unless skilfully treated at the beginning, runs usually a chronic course, while the bacillary form lasts only from four to eight days in mild cases and from three to six weeks in serious ones. 2. In the amebic form no bacilli can be found except under the rare conditions of a mixed infection, with both amebæ and bacilli. 3. Toxic symptoms, such as high fever, rapid emaciation, and nerve complications, exist in bacillary dysentery, but not usually in the amebic form. 4. Liver abscess is a frequent complication of amebic dysentery, and does not exist in the unmixed bacillary form. The conditions necessary for a certain diagnosis of bacillary dysentery are the positive agglutination reactions of the dysentery bacillus with the blood serum of the patient, or the isolation of the bacillus from the feces of the patient, or from the organs after death. Instances are quoted to show the probable introduction of the dysentery bacillus by the mouth. Treatment demands first, rest in bed, warm clothing, physiologic rest for the intestine. Alcohol does not help the dysentery and is bad for the liver. Food should be tepid. Dysentery must be treated just as carefully as typhoid. The bowel should be cleaned out with castor oil, dram doses of magnesium sulphate, or calomel, 1/6 grain. Enemata of saline solution are given for tenesmus, or suppositories of cocain, opium, or belladonna. The bedpan must invariably be used. Quinin should be given if a malarial taint is suspected. Shiga's serum treatment is commended. A new method is the use of a bacterial vaccine. The amebic form is seven or eight times more frequent than the bacillary. The general treatment is as above, but small doses of opium may be required or bismuth salicylate may be given in 15 grain doses every four hours, and a mustard plaster is applied to the epigastrium; he lies flat, without pillows, in bed, and 15 minims of laudanum are given in water, followed in a quarter of an hour by 30 grains of powdered ipecac. Rigid rest is enforced to prevent vomiting. The treatment is repeated nightly, reducing the ipecac by 5

grains and the laudanum by 5 minims each time until no laudanum and only 5 grains of ipecac are being taken. This is continued for a week or ten days. Sandwith has never seen any good from the calomel treatment and thinks it has been fatal in the case of elderly feeble patients. He much prefers magnesium sulphate. Enemata of quinin, 1 in 1,000, raised in a few days to 1 in 500, or silver nitrate, 1 in 1,000, or copper sulphate of the same strength are useful. The enema, a pint in quantity, should be given high with the buttocks raised. This should be given every morning and a cleansing enema of two pints of saline solution, in which an ounce of linseed has been allowed to soak for some hours is given in the evening. All enemas should be warm.

15. **Precocity.**—Guthrie discusses the varieties of intellectual precocity, the age at which special precocity is manifested with reference to musicians, painters and sculptors, poets and literary men, scholars and historians, mathematicians, men of science, naturalists, philosophers and metaphysicians, leaders of men, precociousness of memory and *idiots savants*. His conclusions are that precocity in itself is not a pathologic condition tending to early decease or to premature mental decay and that all eminent men have been precocious as children, though their precocity may have passed unrecognized. If brightness and ability were no longer regarded as morbid or unfavorable signs unless associated with nervous instability and hyperesthesia, and if teachers would refrain from pressing on bright and clever but neurotic children who show signs of impending mental exhaustion which are easily recognized, the term precocity would lose much of its evil significance. The precocious child is not necessarily a genius, but by careful management he may at least be prevented from becoming a failure in mind and body.

18. **Vaccination.**—Gerrard recommends that all vaccination should be placed completely under state control, and that all lymph should be prepared by the government to avoid inequality.

20. **Trigeminal Neuralgia.**—Wright has extended the injection of nerves with osmic acid to the injection of the Gasserian ganglion itself. The patient was anesthetized, and an incision made from above the zygoma downward and curving forward along the lower border of the jaw. The zygoma was resected and turned down and the coronoid process was divided and turned up. The inferior dental and lingual nerves were found and traced up to the foramen. By means of a curved dental syringe a few drops of a 2 per cent. osmic acid solution were injected into the ganglion through the foramen. The nerves were then torn away and the wound closed. The results were fairly satisfactory in the first case and very satisfactory in the second.

22. **Acute Pulmonary Edema.**—Williams describes a case of the form of acute fatal pulmonary edema which comes on suddenly without any premonitory warning. It ended fatally within a quarter of an hour from the beginning of the attack. Although articles have appeared on the subject and many cases have been put on record he remarks that the English and German text-books are almost entirely silent on the subject, the French books being the only ones that seem to take any cognizance of this form of the disease.

Medical Press and Circular, London.

November 27.

26 Lingering Labor: Its Causes and Treatment. J. Morrison.
27 *Tuberculosis in Childhood and Its Relation to Milk. J. McCaw.
28 Abortive Treatment of Syphilis by the Intensive Method. R. Duhot.

December 4.

29 Exophthalmic Goiter and Myxedema. R. W. Philip.
30 High-Frequency Effluvation and Sparking in Treatment of Malignant Tumors. J. A. Riviere.
31 Gastrojejunostomy and Regurgitant Vomiting. K. W. Monsarrat.

27. **Tuberculosis in Childhood.**—McCaw adduces evidence tending to show that the large percentage of tuberculosis met with in children is bovine, and is caused by the ingestion of bovine tubercle bacilli in milk, meat, etc., and that this form of tuberculosis is chiefly surgical. The author's experience is that in limited tuberculous lesions of a surgical nature the injection of Tuberculin R is followed by favorable results. To protect children from tuberculosis McCaw recommends the notification of all births within twenty-four hours so that the infant's environment may be inspected by health visitors; complete control of the milk supply by the state; medical inspection of school children; enforced sanitation of dwelling houses in the poorer districts; segregation of all advanced cases of phthisis, and removal of children from houses containing consumptives, and compulsory notification of tuberculosis. In tuberculin, notwithstanding the general professional lack of confidence in it, he sees a remedy of the greatest value, now that the dose can be graduated by the opsonic index to a nicety.

Glasgow Medical Journal.

December.

32 Breisky's Kraurosis Vulvæ; Four Cases, Three of Them Complicated with Epithelioma. J. Edgar.
33 *Physiopsychology of Hallucinations. J. H. MacDonald.

33. **Hallucinations.**—MacDonald discusses the well known hallucinations of Luther, George Fox, Joan of Arc, Cromwell, Dr. Johnson, Cowper, Pope, Byron and Goethe, and their relations to insanity. He also considers the relation of hallucination to crime. In some forms of insanity, hallucinations are but fleeting episodes, in others they are almost constant phenomena. In many cases they are the earliest phenomena of mental aberration. Hallucinations may be of any of the senses, but those of hearing are the most common, probably, and after them those of sight. He discusses in detail the various forms, and states that when we enquire into their nature we find that their production involves a very complicated mechanism whose component parts are concerned in the functions of sensation, consciousness, perception, and memory (image formation, conservation, and reproduction). Hallucination should be defined in terms not of perception, but of memory, for perception consists in the consciousness of the presence of a real object stimulating one or more of the sense organs, along with the notion obtained of the sensible attributes of the object. The residual something that remains in the nervous system as a consequence of perception, is the "image" which we term visual, auditory, gustatory, olfactory or kinesthetic according to the sensory pathway by means of which the perception has been realized. The faculty of reproducing memory images is not possessed by all men in the same degree, a fact which affords one of the most substantial reasons for differences in intellect and conduct. The various parts of the cerebrum are not all developed proportionately and the inequalities in their evolution cause inequalities in function, which find expression in the readier formation, the more certain and durable conservation, and the readier and more vivid reproduction of images in those parts of the cerebrum best evolved. In this way memory types are formed among men, causing differences in inclinations, emotions or aptitudes. He explains precocity and power in artists by the vividness of their capacity for reproducing mental images, and points out the close resemblance between the images so produced and those of hallucinations. If we suppose this subjective representation of a previous perception—such as will enable certain artists to visualize a person so completely for instance that they can then proceed to paint his portrait in his absence—to be markedly intensified and a reverse current of nerve energy, so to speak, to set in, projecting the image so that it appears to be outside the body, we have one of the theories of hallucination. It is worthy of note that those who are congenitally blind never have visual hallucinations because the sensory centers for vision have never been developed, and there are no visual images conserved therein, but such hallucinations may occur in those who have once possessed the power of sight. A hallucination is never an entirely new creation of the brain, but is simply a reproduction of memory images, and in cases in which the hallucination seems new, strange, and enigmatical, we have to do merely with a new combination of its component elements. Dreams are the hallucinations of the sleeping state. Imagination is the same formation of new ideas from memory images in the waking state. In the sane and waking state the association and coordination of the images is secured by the regulating influence of the higher intellectual centers, while in the insane and in sleep the controlling power is weakened so that imagination

runs riot. It is noticeable that hallucinations vary in different races and at different periods of history according to the knowledge and the dominant ideas of the day and the people. Compare the gods, satyrs, etc., of the Greeks with the saint or devil visions of the middle ages, and the hallucinations of a mechanical character of the present day, the reception of telephone, telegraph, aerial messages, etc. MacDonald next considers the influence of hallucinations on the thought and conduct of the sufferer and their relation to sanity, and in regard to the latter concludes that when the subject of hallucinations fails to recognize these as anomalous productions of his brain, and allows his thoughts to be directed from their ordinary course and his conduct to be regulated by the hallucinatory mental content, he is no longer of sound mind.

Clinical Journal, London.

November 27.

34 *Acute Pulmonary Disorders in Childhood and Infancy. F. J. Poynton.
35 Position, Deformities and Injuries Associated with Adduction of the Foot. E. M. Corner.

December 4.

36 Cirrhosis of the Liver in Children. C. Bolton.
37 Position, Deformities and Injuries Associated with Adduction of the Foot. E. M. Corner.

34. Acute Pulmonary Disorders in Childhood.—Poynton discusses pleurisy, empyema, pneumonia and pneumothorax. Pleurisy is often a puzzling illness in children and infants owing to the detrimental effect of pain with its shock and suffering on such young children. Pleurisy presents striking instances of the simulation of abdominal disease by thoracic disorders, e. g., appendicitis. Pain and tenderness may be referred to the right iliac region when the disease is confined to the chest. He therefore can not agree that all patients with appendicitis should be promptly operated on without a thorough realization of what such a rigid line of action entails. It takes for granted an ability possessed by few to diagnose appendicitis. All will agree that one ought not to operate on the appendix when the condition is a severe pleurisy. Yet a rigid rule of practice will probably lead to this being not infrequently done. Another disease closely simulated by phrenic pleurisy in childhood is general peritonitis. He deprecates the widespread fear of opium in infancy and says it is interesting to see the rapidity with which children in pleurisy come back from what appears to be death's door on relief of pain, for the cautious use of opium is a most effectual remedy. Empyema he considers the most difficult of all pulmonary diseases. Acute tuberculous pleurisy with a clear exudation may, on account of the virulence of the infection,be accompanied by sweating, high irregular fever, wasting and anemia, the general signs of empyema. Exploration is not without danger and rib excision should be preceded by a preliminary aspiration to allow the heart to recover a normal position and to avoid the dangerous collapses he has seen follow on the operating table. As regards shortening the drainage tube he has seen disastrous sequelæ from attempts at rapid closure. Localized empyemata are the most difficult ones to treat. An intralobar empyema is liable to burst into the air passages and thus cause suffocation. Apical empyemata are rare. On the left side the percussion dulness must be distinguished from pericardial extension. On the right side it is closely simulated by tuberculous infiltration of the upper lobe. Suppurative pericarditis is one of the chief dangers of an overlooked empyema. Other dangers are suppurative meningitis and malignant endocarditis. In pneumonia the helplessness of infants introduces curious difficulties, seemingly almost trivial. An infant suddenly refused food. It was noted that there had been some nasal catarrh, and this with the fog, had plugged the nares with mucus and grime, so that breathing was possible only through the mouth, and the child choked on feeding. Removal of the obstruction restored the power to take food.

Annales de l'Institut Pasteur, Paris.

October, XXI, No. 10, pp. 753-831.

38 *Prophylaxis of Syphilis. E. Metchnikoff.
39 Experimental Cancer in Mice. (Cancer expérimental des souris.) J. Bridré.
40 Toxicity of Therapeutic Serums. Besredka.
41 Cultivation of the Pale Spirochete. (Contribution à l'étude de la culture de "Treponema pallidum.") C. Levaditi and J. McIntosh.
42 *Hemolytic Action of Extract of Sclerostomum. G. M. Weinberg.
43 Association of Spirilla of Tick Fever with Trypanosomes. R. Trautman.
44 Analysis of Mixtures of Volatile Fat Acids. A. Lasserre.
45 Malarial Regions Erroneously Claimed to be Free from Anopheles. E. and E. Sergent.

38.—Summarized in THE JOURNAL, Nov. 2, 1907, page 1562.

42. Hemolytic Action of Extract of Certain Helminths Found in the Horse.—The extract of the *Sclerostomum equinum* displayed extreme hemolytic action, dissolving the red corpuscles of the horse and of other domestic and laboratory animals. Extracts of the other intestinal parasites found in the horses did not possess this hemolytic action. The sclerostomum is the only one that feeds on the blood of its host. These findings throw light on the anemia of ankylostomiasis in man.

Presse Médicale, Paris.

November 23, XV. No. 95, pp. 761-768.

46 The "Cardiac Liver." E. Géraudel.
47 Human and Experimental Atheroma and the Suprarenals. Josué.

November 27, No. 96, pp. 769-776.

48 Tuberculosis in a Flatfoot. (Tuberculose d'un ancien pied plat.) A. Broca.
51 Increase in the Population of the Various Countries of Europe.
50 Technic of Antitetanus Serum Injections. P. Hardouin.

Semaine Médicale, Paris.

November 27, XXVII, No. 48, pp. 565-576.

51 Increase in the Population of the Various Countries of Europe.
52 *Local Applications of Arsenic for Septicemia Following Infection of Wounds. S. Cerny (Prague).

52. Local Applications of Arsenic in Septicemia from Infection of Wounds.—S. Cerny of Prague is the author of the local treatment of superficial cancer with arsenious acid. He here reports favorable results from local application of a very small amount of arsenious acid or white arsenic to the infected wound in cases of septicemia. He applies it on a pledget of cotton small enough to be packed into the wound, or else sprinkles the powder on the skin if only the epidermis is involved. The general symptoms gradually subside and the patient recovers. Cerny adds that in contact with the secretions of the wound the arsenic becomes transformed into soluble alkaline arsenites which penetrate through the adjacent tissue where they dehydrate the altered cells and dry them up. It has also a powerful disinfecting action, destroying everything foreign it encounters, while respecting sound tissue. Another important property of the arsenic is its vasodilating influence, thus favoring the afflux of nourishing blood, while it contracts the lymphatics, thus obstructing diffusion of the toxins. The lymph is squeezed out, droplets constantly accumulating on the surface of the wound. To absorb them, he applies moist antiseptic compresses over the wound and region, above the arsenic. In his extensive experience with this treatment during the last two years he has never observed any by-effects or symptoms of intoxication. He suggests that the arsenic treatment might prove useful in case of snakebite, but has not had much clinical experience in this line. He believes that this local arsenic treatment will render surgical measures superfluous in many cases, and save limbs otherwise doomed to amputation to arrest the blood poisoning.

Archiv für klinische Chirurgie, Berlin.

LXXXIV, No. 3, pp. 629-915. Last indexed, Nov. 30, p. 1881.

53 Abdominal Gunshot Wounds in the Russo-Japanese War. (Bauchschüsse.) L. Bornhaupt.
54 Traumatic Arteriovenous Aneurism of the Internal Carotid with Pulsating Exophthalmos. Becker.
55 Constriction Hyperemia in 138 Cases of Acute Suppurative Infections. (Stauungsbehandlung acuter eitriger Infectionen.) L. Wrede.
56 Experimental Study of Changes in Stomach Due to Thrombosis and Embolism in Portal Vein Region. (Magenveränderung nach Thrombose und Embolie im Pfortadergebiete.) E. Payr.
57 *Cancer After Exposure to Roentgen Rays. (Entstehung bösartiger Neubildungen auf der röntgenbestrahlten Haut.) E. Schümann.
58 *Consequences of Nephrotomy for the Human Kidney. (Folgen der Nephrotomie für die menschliche Niere.) W. Röpke.
59 Juvenile Fractures of the Tubercle of the Tibia and Scaphoid and of the Heel. (Juvenile Fracturen der Tuberositas tibiæ, Tuberositas navicularis und des Tuber calcanei.) A. Kirchner.

57. Cancer Following Roentgen Exposures.—Schümann reports another case of cancer developing on the hand of a Roent-

gen operator; the growth was removed by Trendelenburg last February. He also reviews the other similar cases on record, including that of Dr. Fuchs of Chicago, whose death occurred recently four of these professional cases occurred at Hamburg, which has been a center for Roentgen work in Germany. Schümann states that he has found no record of cancer developing after an acute *x*-ray burn. Chronic *x*-ray dermatitis seems to be the soil on which the cancer develops. He calls attention to the fact that chronic Roentgen dermatitis has many points in common with other skin affections, which likewise predispose to cancer. The Roentgen cancer seems to affect young persons —the fatal cases were all in men just entering the thirties. The carcinoma has generally several centers and rapid growth was observed in most. In conclusion he reviews the cases on record in which cancer developed after Roentgen treatment of lupus. Mendes da Costa had this experience in seven out of seventy-one cases of lupus treated by Roentgen exposures. Wyss and others have reported similar cases, but the number is so small in comparison with the number of persons who have had lupus cured under Roentgen treatment, that Schümann does not think the possibility of cancer should deter from its application. Riehl observed a spindle-celled sarcoma and a carcinoma develop an inch apart on the site of a patch of lupus which had healed seven years before under seventy Roentgen exposures. In one of the cases of professional Roentgen cancer the patient had a carcinoma on the arm and a spindle-celled sarcoma on the right cheek. Treatment should be the same as for other forms of cancer, and the wound heals as under other conditions.

58. **Consequences of Nephrectomy for the Human Kidney.**—Röpke summarizes the findings in nine cases after nephrotomy, one from his own experience. In most cases the formation of an infaret was evident. The kidneys which escaped this had all been incised along the natural dividing line between the halves of the organ, the vessels thus all escaping injury. Zondeck asserts that this can be accomplished by making the incision 1 cm. behind the highest convexity, in the direction toward the kidney pelvis, thus incising in the natural space between the ventral and the dorsal systems of blood vessels.

Berliner klinische Wochenschrift.

November 25, XLIV, No. 47, pp. 1499-1530.

60 *Case of Diphtheria Bacillus and Streptococcus Sepsis. P. Mahler.
61 *Milk Containing Iron. (Ernährung mit eisenhaltiger Kuhmilch.) Schnütgen.
62 Influencing Electric Excitability of Children with Tetany by Application of Galvanic Current. (Beeinflussung der elektrischen Erregbarkeit bei tetaniekranken Kindern durch den galvanischen Strom.) P. Philippson.
63 *Ocular Reaction to Tuberculin. (Ophthalmoreaktion auf Tuberkulin.) S. Cohn.
64 Forensic Reliability and Importance of Complement Binding Biologic Test. (Forensische Verwertbarkeit und Kenntnis des Wesens der Komplementbindung.) C. Bruck.
65 Cold Abscess of Larynx. (Kalter Abscess des Kehlkopfes.) A. Rosenberg.
66 Successful Operative Treatment of Traumatic Meningitis. A. Schlesinger.
67 Anatomic Bases for Weakness of the Heart. (Anatomische Grundlagen der Herzschwäche.) H. Beitzke.

60. **Case of Diphtheria Bacillus and Streptococcus Sepsis.**—Mahler reports a very severe case of this condition in a unipara of 31, treated by antidiphtheria and antistreptococcus serums. An extensive erythem developed, followed by dry necrosis of the skin involved, leaving a defect down to the muscles on the thigh as the patient recovered.

61. **Cow's Milk Containing Iron.**—The cows are fed with a prepared fodder which insures that the milk contains a certain proportion of iron. Schnütgen reports from Senator's clinic nine cases of debility in adults in which great benefit was apparently derived from ingestion of a quart of this milk daily.

63. **Ocular Reaction to Tuberculin.**—This is another favorable verdict on this test for tuberculosis, but Cohn found that 8 out of 12 typhoid patients also presented the specific reaction to instillation of the tuberculin. He remarks that if these findings of a positive response to the tuberculin test are confirmed in other clinics it will demonstrate that a specific hypersensibility to bacterial albumin in general is evolved in the course of typhoid fever, as well as to typhoid bacillus extracts in particular. None of his pneumonia patients gave a positive response except in one case in which there were other signs of tuberculosis. Cohn's conclusions from these and other experiences with the 310 patients tested at A. Fraenkel's clinic at Berlin are to the effect that a positive reaction to instillation of a 1 per cent. solution of tuberculin is presumptive evidence of tuberculosis. The reaction was positive in 38 out of 41 patients in the first and second stages of tuberculosis, but only in 22 of 45 in the third stage. He found that a subsequent subcutaneous injection of tuberculin is liable to reproduce the local reaction in the eye or elicit it if it had not appeared before. He proposes to follow with care the after-history of the three patients in whom the reaction was negative in the first group. A negative response to the test is not an absolute sign of the absence of tuberculosis, he remarks, as half of the patients in the third stage of tuberculosis gave negative response. A single instillation enhances the susceptibility to the action of the tuberculin in non-tuberculous adults—not in infants—so that a second instillation in the same eye is liable to induce the reaction; in the tuberculous, in this case, the reaction generally involves the other eye.

Deutsche medizinische Wochenschrift, Berlin.

November 21, XXXIII, No. 47, pp. 1929-1976.

68 *Treatment of Arteriosclerotic Atrophy of the Brain. A. Cramer. Clinical lecture.
69 *Combination of Tabes Dorsalis and Affections of Heart and Large Vessels. (Vereinigung der Tabes dorsalis und Erkrankungen des Herzens und der Gefässe.) A. Strümpell.
70 *Importance of Cellulose in the Diet of Diabetics. (Bedeutung der Zellulose für den Kraftwechsel der Diabetiker.) A. Schmidt and H. Lohrisch.
71 Treatment of Luxations in General. H. Tillmanns.
72 *Treatment of Eclampsia. E. Bumm.
73 Benefit from Systematic Lumbar Puncture in Treatment of Cerebrospinal Meningitis. J. v. Bokay.
74 Inflammation of Normal Skin Induced by Static Brush. (Die durch den faradischen Pinsel hervorgerufene Entzündung der normalen Haut.) C. Kreibich.
75 Pathogenesis and Treatment of Multiple Abscesses in Infants. (Multiple Abszesse im Säuglingsalter.) F. Lewandowsky.
76 Diet in Treatment of Obesity. (Küche für Entfettungskuren.) W. Sternberg.
77 Chair for Office Examinations. (Untersuchungsstuhl.) A. Deutsch.
78 Suture Material Put Up to Remain Permanently Sterile. (Dauernd steriles Fadenmaterial.) Wederhake.

November 28, No. 48, pp. 1977-2024.

79 *Treatment of Apoplectic Seizure. (Behandlung des apoplektischen Insults.) Goldscheider. Clinical lecture.
80 *The Latest Immunization Procedures. (Neuere Immunisierungsverfahren.) A. Wassermann. Commenced in No. 47.
81 *Ocular Reaction in Tuberculosis. (Ophthalmoreaktion.) E. Franke.
82 Acute Leukemia and Streptococcus Sepsis. H. Eppenstein.
83 Treatment of Strictures of Urethra with Fibrolysin. H. Lang.
84 Lime, Phosphorus and Nitrogen in the Child Brain. (Kalk, Phosphor und Stickstoff im Kindergehirn.) M. Cohn.
85 *Acute Poliomyelitis and Kindred Conditions. F. Harbitz.
86 Four Cases of Familial Congenital Cataract. Enslin.
87 *Importance of Differential Diagnosis of Organic and Functional Aphonia. E. Barth.
88 Two Cases of Poisoning with Nutmeg. (Vergiftung mit Muskatnuss.) G. Mendelssohn.
89 Important Points in Disinfection. (Desinfektionslehre.) Christian.

68. **Treatment of Arteriosclerotic Atrophy of the Brain.**—Cramer thinks that the physician has it in his power to arrest the process and restore the patient to his business, or at least to prolong life or postpone mental decay in case hemiplegia is already established. The success depends mainly on the promptness with which treatment is instituted as soon as the triad of headache, dizziness and occasional lapses of memory is observed. The first condition for success is to rest the affected organ, which can be done only by keeping the patient away from business and eventually away from his family. If there are unusual causes for worry in business or family life and if family and friends do not cooperate with the physician to keep the patient's mind at rest, then the great demands on the vascular system from the emotions experienced cause the incipient brain affection to make rapid progress, and the physician's efforts are liable to prove futile. All demands on the vascular system should be reduced to the minimum. The patient is advised to keep in the open air with carefully regulated walks on level ground, avoiding all kinds of strenuous exercise, loud, continuous speaking, alcohol, cohabitation, etc. The patient must also be warned to travel only during cool weather, for long sittting in a hot car on a very hot, muggy day is a severe tax on the heart and vessels. The intestinal functions must be supervised; straining at stool is dangerous. Oil enemas may

prove useful in chronic constipation, but should not be kept up for more than two weeks as they have a depressing effect. A course of treatment with Carlsbad Mühlbrunnen has always proved successful in Cramer's experience. He has the patient take a glass or two before breakfast for a month and then skip a month, to begin again if necessary. In the intervals, if fruit in the evening does not answer the purpose, he gives a mild laxative, changing it each time. This treatment kept up for six months or more, with the Carlsbad water every second month, has been very effectual. In less than a week the mental disturbances previously noted have completely subsided. In case focal symptoms are already apparent, absolute rest must be enforced and fluctuations in the blood pressure avoided until a certain consolidation of the acute cerebral process can be assumed. Medicinal treatment should be commenced at once on the first suspicion of arteriosclerotic atrophy of the brain, with potassium or sodium iodid in a simple solution as the main reliance. He commences with 0.25 gm. (4 grains) of the iodid, increasing the dose very gradually up to 2, 3 or 4 gm. (30, 45 or 60 grains) a day. This treatment should be kept up for years, interposing pauses of a week or two every six weeks. Even in case of an idiosyncrasy to the iodid and reaction with coryza, some of his patients have kept up the iodid notwithstanding, to their great ultimate benefit. In case the patient reacts to the iodid with loss of apnetite or albuminuria, the drug should be stopped at once. The iodid should never be given alone; it is best given with milk and after a meal. In case of much mental disturbance the bromids can be temporarily given in connection, and stopped when the patient is tranquilized.

69. **Tabes and Heart and Vascular Affections.**—Strümpell calls attention to the frequent coexistence of aortic or other vascular affections with tabes. He thinks that they are all the result of one cause—syphilitic infection. The discovery of some symptom suggesting tabes, such as absence of pupil reaction, is an instructive finding in a vascular affection. The tendon reflexes are also important from this point of view.

70. **Importance of Cellulose in the Diet of Diabetics.**—Schmidt and Lohrisch have found cellulose very useful in the diet of diabetics whose glycosuria persists in spite of the complete absence of carbohydrates from the diet. Cellulose is a food of the second class, producing warmth but not sparing albumin. Its nutritive value has been stated to be 37.5 gm. fat and 75 gm. cane sugar as equivalent to 100 gm. cellulose. The tabulated metabolic findings in three cases are given in detail before, during and after a period of ingestion of cellulose. No by-effects or injurious after-effects were observed, while the findings indicate that 75 per cent. of 30 grains of cellulose was assimilated daily and had a favorable influence on the metabolism and energy. It was given in the form of a vegetable rich in cellulose, but deprived of starch, etc., by a special process of preparation. The vegetable used was dried white cabbage, chopped, and boiling water poured over it several times until the water ceased to give the reaction for sugar. The cabbage was then dried and ground fine. The preparation then contained about 50 per cent. pure cellulose, and from 1 to 3.5 per cent. nitrogen. The cabbage was given to the patients in the form of a broth with an absolute meat diet. They are experimenting with other methods of giving the cellulose now that they have demonstrated that some diabetics can readily assimilate cellulose. Two out of the five patients submitted to the tests failed to assimilate appreciable amounts of the cellulose, and they are not included in the tables.

72. **Treatment of Eclampsia.**—Bumm remarks that treatment of eclampsia is still merely empiric-symptomatic, and that the physician is powerless in the severer forms. These seem to occur in groups, and autopsy reveals extensive necrosis in kidneys and liver. This malignant form is distinguished less by the number and severity of the convulsions than by the profound coma which may follow the first convulsions, and be accompanied by complete absence of reaction to any stimuli. It is frequently accompanied by fever, hemoglobinuria or complete suspension of the renal functions, and jaundice. He has recently had occasion to observe a series of cases of this severe type. Rapid delivery had a mortality of only 2 or 3 per cent. in his experience, when done after the first attacks, while the death rate was between 23 and 30 per cent. when delayed later. Instrumental dilatation of the undilated cervix is liable to cause injury, and the balloon takes too much time; better results were attained by slitting the anterior wall of the cervix. The fetus can then be extracted and the whole operation concluded in ten minutes. This technic requires an expert, he says, and one should be summoned early in every case of eclampsia. Only when delivery is rapidly pushed through can good results be anticipated. If a number of attacks have already occurred the parenchyma of liver and kidneys is seriously injured by this time and the prognosis is far from good. There has been a reaction of late years against narcotics in eclampsia, as they have a mortality of 30 per cent. at least—just about the same, Bumm remarks, as if nothing had been done. The narcotic merely arrests one symptom but by no means cures the eclampsia. It aggravates the condition when injected during coma and may weaken the heart action and respiration and thus favor pulmonary edema. He says that there is no sense in giving a paralyzing poison to a woman already suffering from a paralyzing poison. At the commencement of the eclampsia, while the consciousness is unimpaired and the nervous system still responds to stimuli, there is less objection to the use of narcotics. In these conditions Bumm has found that morphin acts best when given by the rectum; possibly it may thus act directly on the nerve ganglia which transmit the convulsion-exciting stimulus. No benefit has been derived from lumbar puncture and reduction of the pressure of the cerebrospinal fluid. Drugs to stimulate the kidneys to action fail of their effect in eclampsia; hot packs around the trunk on a level with the kidneys, combined with repeated massage of the kidneys, are liable to be more effectual.

79. **Treatment of Apoplexy.**—Goldscheider lays great stress on the necessity for leaving the patient where he is, not attempting to remove him. If he has to be taken elsewhere the transportation must be done with extreme gentleness, and the distance reduced to the minimum. He should never be allowed to travel, even in the mildest cases. The clothing should be removed as if the patient had been severely wounded—cut off if necessary. The aim is to keep him absolutely quiet; he must not make a movement nor speak, but be placed with the chest and head slightly raised, in a quiet, cool room. No one should be allowed to tempt him to speak or induce emotional excitement. An ice bag to the affected side of the head in case the face is congested and hot is useful. In case of difficulty in respiration during coma the mouth and throat should be wiped out repeatedly and the head bent forward a little to keep the tongue from falling back, or the jaw and tongue may have to be drawn forward. Oppenheim recommends lying on the side. In case the patient vomits, he must be quietly and cautiously turned on the side and the vomited masses wiped away to keep the air passages free, supporting the head the while. The nurse in such cases must be well-trained, and if the patient is a very heavy man a strong male nurse is preferable. No means are known by which vomiting can be prevented in these circumstances. Mustard pastes and moist heat to the epigastric region or calves might be tried, and venesection should be considered. The latter generally produces a transient improvement, and in exceptional cases the improvement may be permanent. The theoretical objections against venesection are not sustained in practice. Still better results might follow if it were done earlier. He advocates it when the cerebral hemorrhage is diagnosed beyond question, and the congestion in the head with full bounding pulse persists while the comatose condition continues unmodified or is growing worse. Small, weak, rapid pulse and pallor contraindicate venesection. He withdraws from 200 to 300 c.c. of blood from the arm on the unparalyzed side. Collapse, insomnia, headache, convulsions, should be treated symptomatically, not shrinking from narcotics. It is generally better to leave the patient quiet than to apply mustard paste, vinegar enemas, or other revulsive measures of doubtful utility. The physician should himself investigate the patient's capacity for swallowing. One spoonful can be swallowed, perhaps, but a little time is required for the parts to recover from the fatigue of deglutition before another spoonful can be managed. The second spoonful should never

be given until convinced that the preceding one has been duly swallowed. Even when the swallowing reflex seems working normally, nothing should be given by the mouth in case of complete unconsciousness or great stupor. The patient does not feel hunger or thirst in such case, and if the blood pressure drops from transient inanition, so much the better. In case of weak pulse or collapse, fluids should be supplied by the rectum or by subcutaneous infusion. Feeding by the stomach tube is not advisable except when the paralysis of the swallowing muscles persists with full consciousness. Purgatives disturb the patient, and straining is liable to be dangerous, but a cautiously given rectal enema may be useful, and the urine may have to be drawn several times a day. The iodids should be commenced at once in case of gradually developing hemiplegia in arteriosclerotics, but it is better to wait for a week after an apoplectic stroke, especially when the patients are unaccustomed to the drug.

80. Progress in Immunization.—Wassermann reviews the history of immunization in the last few years, showing the practical results attained. Among them he mentions the active protecting inoculations against typhoid fever, plague and cholera, the serum diagnosis of syphilis, the differentiating cutaneous and ocular reactions to tuberculin, the work with opsonins and the introduction of antidysentery and antimeningococcus curative serums—all of which have proved of practical benefit.

81. Ocular Reaction in Tuberculosis.—Franke reports experiences which confirm the testimony of others in regard to the diagnostic value of this simple test which any physician can readily apply.

85.—This article appeared in THE JOURNAL, Oct. 26, 1907, page 1420.

87. Differentiation of Organic and Functional Aphonia.—Barth emphasizes the fact that a comparatively slight organic affection of the throat may be accompanied by a functional aphonia. The latter is due to disturbances in coordination, and as soon as correctly coordinated movements can be regained the aphonia is cured, although the organic affection may still persist. Treatment should therefore be two-fold, directed in turn against the organic and the functional disturbances. This is especially necessary in tuberculosis. In a case described, the patient was growing more and more depressed over her progressive pulmonary tuberculous affection and aphonia. A sudden fright restored her voice, and this encouraged her and was soon followed by the arrest of the tuberculous process.

Jahrbuch für Kinderheilkunde, Berlin.

November, LXVI, No. 5, pp. 503-632.

90 Metabolism and Energy of the Child Between Ages of Three and Six. (Stoff- und Kraftwechsel des Kindes im dritten bis sechsten Lebensjahr.) E. Müller.
91 *Curative Serum Made by Moser's Technic in Treatment of Scarlet Fever. (Mosers Serum als Heilmittel bei Scharlach.) B. A. Egis and N. J. Langovoy. Experiences with Same. W. Moltschanoff.

91. Serum Treatment of Scarlet Fever.—The mortality in the severer cases was reduced under the serum treatment from 47.4 to 16.1 per cent. in the extensive experience in Russia related. The action seems to be antitoxic, but no effect on the complications of the disease were observed. The frequency of by-effects and the large amounts of the serum required are the dark side of the experiences related. In Moltschanoff's experience the mortality dropped from 16.2 to 10.4 per cent. The temperature always subsided after application of the serum and sometimes the pulse, respiration and nervous phenomena also showed marked improvement, but there did not seem to be much of an effect on the disease process as a whole. The duration of the fever or of the sickness did not seem to be influenced and the throat lesions were not modified, while there was no evidence that it prevented complications or influenced their course.

Mitteilungen a. d. Grenzgebieten der Med. und Chir., Jena.

XVIII, No. 2, pp. 169-376. Last indexed, Nov. 9, p. 1640.

92 Chronic Appendicitis with Adhesions. (Appendicitis chronica adhaesiva.) H. v. Haberer.
93 *Experiences at Heidelberg with Affections of the Pancreas. (Pankreaserkrankungen.) L. Eloesser.
94 Spontaneous Rupture of the Esophagus. F. Cohn.
95 Function of the Vater-Pacinian Corpuscles. M. Ramström.
96 *Experimental Study of Function of Thyroid and Parathyroids. (Funktion der Schilddrüse und der Epithelkörperchen.) E. Hagenbach.

93. Pancreatic Affections.—Eloesser describes nearly 75 cases of acute and chronic pancreatitis, tumors and cysts, and reviews them from the standpoints of differential diagnosis, operative technic, etc. The Cammidge test of the urine was applied in 16 cases and the results harmonize with Cammidge's assertions with the exception of one case in which the reaction was positive, but the pancreas proved to be sound. The reaction was never obtained in numerous tests of healthy persons. Eloesser declares that if further experience confirms the value of this test it will prove to be a most important step in progress in the early diagnosis of pancreatic affections, although the technic is complicated and its interpretation is not easy. The technic was summarized in THE JOURNAL, Oct. 26, 1907, page 1460. In some cases of chronic pancreatitis dragging along for about a year before operative intervention restored the patients to health, the lack of fever and the absence of symptoms pointing to the pancreas were noticeable. The emaciation and the pigmentation might perhaps have suggested a pancreatic affection. A hemorrhagic diathesis seemed to be particularly marked in the cases of jaundice with pancreatic complications. Hemorrhagic pancreatitis with fat necrosis is not a bacterial process, and consequently can only benefit by removal of the extremely toxic matters. He therefore advises immediate operation in every abdominal affection suggesting the possibility of hemorrhagic pancreatitis unless collapse is directly imminent. If fat necrosis is found, intervention should be restricted to the pancreas and concluded as rapidly as possible, draining from the rear, and giving calcium chlorid before and after the operation to combat the hemorrhagic tendency. In chronic pancreatitis clay-colored stools are frequently observed even when there is still free outlet to the bile. That finding, in the absence of icterus, points to the pancreas. Fat stools also suggest a pancreatic affection when there is no jaundice. In one case described, the symptoms of chronic pancreatitis subsided after a gastroenterostomy. In another case the findings suggested cancer of the pancreas, but gastroenterostomy relieved the patient, a woman, and although the pancreas is still enlarged, she is otherwise in good health nearly four years since the operation. In simple cirrhosis of the liver the jaundice does not appear so suddenly and the emaciation is not so sudden and extreme as in case of a pancreatic affection. The symptoms of chronic pancreatitis extended over 14 and 20 years in three cases and in others over many months and years. This long duration of the affection differentiates it from cancer. A number of cases are on record in which the patients recovered completely after the abdomen had been opened and closed again on discovery of a supposed inoperable cancer in the pancreas. Eloesser thinks that the recovery in these cases was due principally to the measures preparatory for and consecutive to the laparotomy. He believes that some of the patients would have recovered without the laparotomy if they had been thoroughly purged and then kept on a "laparotomy diet" for a time. Whenever food is taken the pancreas function is excited and the hyperemia and swelling of the gland keep up the inflammation. By complete rest of the gland, conditions favorable to healing are provided. The marked tendency to hemorrhage and icterus, however, frequently compel operative interference, as also the fear of pancreatic diabetes later. Phillips has recently reported that out of six patients treated with internal measures for a long time, two developed glycosuria and died in diabetic coma, and Mayo Robson has reported tardy glycosuria in a patient who had been in good health for six years after simple laparotomy. He believes that this might have been prevented by opening up the biliary passages. The operations that relieve the biliary passages and divert the bile from the pancreas certainly seem more rational treatment. Eloesser also discusses the frequent coincidence of a traumatic pancreatic affection with pregnancy, especially cysts in the pancreas. One patient with a pancreatic cyst recovered under internal measures alone. Attention is called to his method of stretching the intrapancreatic portion of the common bile duct in chronic pancreatitis. This part of the duct is liable to be

compressed by sclerotic changes in the surrounding tissue, and its dilatation may suffice for restoration of a normal outflow of the pancreatic secretions, although it does not prevent return of the compression later.

96. Functions of the Thyroid and Parathyroids.—Hagenbach summarizes his experimental research in the statements that cats bear removal of the thyroid gland and the inner parathyroid bodies. The outer parathyroid bodies left preserve the animal from tetany. They do not act vicariously for the missing thyroid gland, and consequently typical cachexia thyreopriva develops. The anatomic findings then suggest athyreosis (congenital myxedema, etc.). Subsequent removal of the two remaining parathyroid bodies is followed by pronounced tetany. It is evident, he adds, that the thyroid and the parathyroid bodies are entirely different, both in their embryonal development and in their functions.

Münchener medizinische Wochenschrift.

November 19, LIV, No. 47, pp. 2313-2360.

97 Diagnostic Importance of Pupil Symptoms. O. Bumke.
98 Hemolysis from Snake Venom. (Hämolyse durch Schlangengift.) Coca and von Dungern.
99 *End Results of Tuberculosis Sanatorium Treatment. (Dauerresultate der Lungenheilstätten.) K. Croissant.
100 Flatfoot and Tuberculosis of the Ankle. (Plattfuss und Fusswurzeltuberkulose.) P. Ewald.
101 Ophthalmia Neonatorum. (Augenentzündung der Neugeborenen.) F. Schanz.
102 Varying Findings in Respect to Spirochete of Syphilis. (Wechselndes Vorkommen der Luesspirochäte.) H. Vörner.
103 Aneurism of the Aorta After Acute Aortitis. P. Buttersack.
104 Transient Edema of the Papilla of One Eye. (Eine Lokalisation des akuten umschriebenen Oedems.) C. Handwerck.
105 Colored Photomicrographs. (Buntfarbenmikrophotogramme.) R. Hoffmann.
106 Loop Tape Measure for Precise Measurements of Circumferences. (Fesselbandmass.) K. Wahl.
107 Improved Spectroscope. (Neues Spektroskop.) O. Schumm.
108 Functions of the External Ear. R. Geigel.

November 26, No. 48, pp. 2361-2408.

109 *Dangers and Treatment of Placenta Prævia. P. Zweifel.
110 Appendicitis in Children. (Blinddarmentzündung der Kinder.) B. Riedel.
111 *Operative Mobilization of Rigid Chest Wall in Treatment of Apical Tuberculosis and Alveolar Emphysema. (Operative Mobilization des in der oberen Apertur stenosierten und des starrdilatierten Thorax.) W. A. Freund. Id. A. Stieda.
112 Acute Fatal Poisoning from Industrial Benzol Fumes. (Benzoldampf.) L. Lewin.
113 Two Cases of Fatal Intoxication from Intrauterine Treatment of Endometritis with Solutions of Zinc Chlorid. (Gebrauch von Chlorzinklösungen bei der Behandlung der Endometritis.) M. Hofmeier.
114 Successful Transplantation of an Epithelioma Induced by Ether in the Lens of a Salamander. F. Reinke.
115 Chemical Physiology of the Cell Nucleus. (Chemische Physiologie des Zellkernes.) H. Studel.
116 *Kaolin—Fuller's Earth—in Treatment of Diarrhea and Meteorism of Various Origins. (Die Stumpfsche Bolustherapie.) J. Görner.
117 Treatment of Epididymitis and Buboes with Constriction Hyperemia. K. Stern.
118 Protection of the Perineum. (Dammschutz.) P. Mathes.
119 Advantages of Warming the Chloroform for General Anesthesia. Haun.
120 Plastic Pubiotomy, to Render the Effect Permanent. Id.
121 Flowing Steam Sterilizer. W. Prausnitz.

99. Permanent Results of Sanatorium Treatment of Tuberculosis.—In Germany the 87 public and 37 private sanatoriums for lung affections, with 8,422 and 2,000 beds respectively, are not turning out many permanently cured patients. That is to say, the permanent results of sanatorium treatment are no better than those of dispensary treatment alone for the working classes. This is particularly true of patients in the first stage of the disease. Croissant has been making a special study of the conditions at Heidelberg, comparing the end results of sanatorium and dispensary treatment. The sanatorium treatment is not followed on an average by longer survival, but occasionally the result is a brilliant one. Patients in this class, who live rationally and thus maintain the benefits derived, form an object lesson on the prevention and cure of tuberculosis that can not fail to be of far reaching benefit, although the effect can not be estimated for years to come. The great drawback to sanatorium treatment is that the patients return to their former unhygienic mode of life, and the benefit derived soon slips away from them.

109. Placenta Prævia.—After reviewing the dangers of placenta prævia for mother and child, Zweifel remarks that the mother alone should be considered when the fetus is small and the delivery is premature. Such children seldom survive in case of placenta prævia; during the last eight years only 8 children weighing less than 2,500 gm., and 39 weighing over this left the clinic alive out of 178 cases of placenta prævia. Of this number only 78 were born alive. He advises tamponing for a week at least in every case in which hemorrhage during the last half of pregnancy suggests the possibility of placenta prævia. The colpeurynter is indispensable for this, and it can be kept ready for use in oil or glycerin. The hemorrhage is best arrested by prompt version, but the child should not be delivered until the os is nearly or entirely dilated. This waiting is dangerous for the child, and when there seems to be no danger of laceration of the cervix he advises intervention. As the lacerations occur only while the head is emerging, it is possible, by waiting during this stage, to have the head spontaneously delivered. The fingers should be held so as to protect against laceration and allow the child to draw air into the lungs, or a catheter can be inserted in the mouth. In case of placenta prævia centralis, the two fingers introduced for combined version should be passed around the front lobe of the placenta if possible, as this is less injurious to the child than boring through the afterbirth. Scarcely any child survives when the latter is done, and consequently there is no further need for haste in delivery. Premature delivery occurs often with placenta prævia, in which case active measures are not necessary, the prospects for survival of the child being so meager. None of the patients in his experience would have been benefited by Cesarean section, while the mortality would certainly have been higher in the 274 cases of placenta prævia since 1888. There was fatal hemorrhage in 17, puerperal fever in 2, and sepsis in 3. The women had lost a quart or two of blood before entering the maternity in the fatal cases, or sepsis was already under way. The total mortality was 8 per cent. He urges prompt removal to a maternity on suspicion of placenta prævia.

111. Surgical Treatment of Apical Tuberculosis and Emphysema of the Lungs.—Freund's experience has been peculiar. Fifty years ago he published arguments showing the feasibility and possible great benefit to be derived in certain cases in which the chest wall had lost its elasticity by restoring elasticity by resection of a part of the rigid wall. His suggestion met with no response until recently, when it has been acted on with brilliant results in some cases, as mentioned in these columns. Freund here goes over his arguments again, reenforcing them. They have gained an unanticipated support in radioscopy, and clinical experience seems to confirm his conclusions in every respect. Stieda here reports a case of chronic emphysema of the lungs improved to such an extent by Freund's operation that he earnestly commends it as the routine procedure for all cases of chronic emphysema resulting from primary rigidity of the chest wall from degeneration of the costal cartilages. His patient was a sailor 51 years old.

116. Kaolin—Fuller's Earth—in Treatment of Diarrhea and Meteorism.—On Dec. 22, 1906, page 2113, THE JOURNAL described the favorable results obtained by Stumpf in the treatment of cholera with Kaolin—fuller's earth or bolus alba—taken internally. He has also found it extremely beneficial in treatment of gastric ulcer, as a dressing for wounds, etc. Nearly half a pound of the kaolin (200 gm.) is stirred into a glass of water and drunk at once. A number of clinicians have confirmed his statements in regard to the therapeutic value of this treatment, and Görner here relates extensive experience with it. He gives from 50 to 100 gm. (750 to 1,500 grains), stirred into a glass of water; and the patient drinks it at once. Infants are given from 10 to 30 gm. (150 to 450 grains) of the kaolin. It is taken on an empty stomach. Acute gastrointestinal catarrh is especially adapted for this treatment, he says. The vomiting and diarrhea are rapidly arrested, and convalescence promptly follows. In chronic catarrh the effect is less manifest, although benefit is frequently observed. He commends this treatment as a simple means of arresting diarrhea of all kinds. He adds that prophylactic administration of fuller's earth might protect persons exposed to typhoid fever, and might prove useful to disinfect the intestines before an operation. He has had no experience with the kaolin in treatment of cholera, but as Stumpf's assertions in other respects have been so amply confirmed, he urges a trial of it in this disease. In five infants out of nine

with severe dysentery or gastrointestinal catarrh, the result of the treatment was satisfactory, but it failed to relieve in cases of long standing. It never disturbed the appetite nor induced flatulence or constipation. Benefit was apparent in all but three of twenty patients with diarrhea from tuberculous intestinal processes. Even in a severe case of general amyloidosis the palliative effect was good, arresting the diarrhea for five days each time it was given. One or at most two doses cured at once in eight cases of severe gastroenteritis. Stumpf took nearly half a pound of the kaolin every morning for a long time to prove its harmlessness. He ascribes its therapeutic efficacy mainly to its mechanical action, burying the germs in the clay.

Gazzetta degli Ospedali, Milan.

November 3, XXVII, No. 132, pp. 1379-1394.

122 *Cultivation of Typhoid Bacilli from Blood in Bile Culture Medium. (Ricerca del bacillo del tifo nel sangue colle culture in mezzi biliari.) L. Borelli.
123 *Treatment of Cutaneous Epithelioma. G. Polini.

November 10, No. 135, pp. 1411-1426.

124 Virulence of Certain Intestinal Germs in Connection with the Products of Putrefaction. G. Fornario.
125 *General Relaxation of Joints. (Sindesmolisi poliarticolare.) L. Tarabini.
126 *Ocular Reaction to Tuberculin. (Oftalmo reazione Calmette.) G. Malan. Id. G. Alessandri.
127 Clamp for Intestines. (Nuovo enterostato.) S. D. Herbin.
128 *Symmetrical Gangrene of Extremities. D. Sassi.

November 17, No. 138, pp. 1443-1458.

129 *Rhizomelic Spondylosis. A. Giovine.
130 Diagnostic Value of Cutaneous Reaction to Tuberculin. S. Cannata.
131 Value of Auto-serodiagnosis and Inefficacy of Auto-serotherapy. P. Tagliamuro and M. Mauro.
132 Anesthetic and Therapeutic Action of Blue Light. (Luce azzurra.) A. M. Winderling.
133 Polyclonia and Camphor Bromide. (Policlonia e bromuro di canfora.) E. Tognoli.
134 *Conjunctivitis in Early Diagnosis of Measles. (Nuovo sintoma precoce del morbillo.) A. Belfadel.

November 24, No. 141, pp. 1475-1490.

135 Origin of Cheyne-Stokes' Phenomenon. A. Pari.
136 Mulberry Juice as Differentiating Reagent. (Nuovo indicatore.) G. Campanella.
137 Premenstrual Fever Presumptive Sign of Latent Tuberculosis. P. Galli.
138 Chronic Serous Vaginalitis of the Spermatic Cord Result of Incomplete Obliteration of Embryonal Passage. G. de Poloni.

122. **Cultivation of Typhoid Bacillus on Bile.**—Examination of the blood for typhoid bacilli has been found simple and reliable at Bozzolo's clinic when bile was used for the culture medium. The most convenient preparation was a glycerin-aqueous solution of a dried alcoholic extract of desiccated bile. The bacilli are found most constantly during the first week and during exacerbations or relapses of the typhoid fever.

123. **Local Treatment of Superficial Cancer.**—Polini asserts, from much experience, that chlorid of zinc is superior to arsenic and other drugs in the local treatment of cancer.

125. **General Relaxation of the Joints.**—Tarabini summarizes nine cases from the literature and reports in detail a case personally observed in which a housemaid of 20, previously healthy, gradually developed a condition of general relaxation of the joints, especially the articulations of the jaws, shoulders, and ankles; the ligaments were evidently relaxed beyond control. Some of the joints seemed swollen and attempts to use them induced pain. Aubeau ascribes the condition to a lymphatic diathesis, but nothing of the kind was apparent in this patient. The blood findings were: Hemoglobin, 85; reds, 4,504,000; whites, 8,200. The leucocytes included 41.66 per cent. lymphocytes, of which about 23 per cent. were small; 55 per cent. polynuclears, and 3.33 per cent. acidophiles.

126. **Ocular Reaction to Tuberculin.**—Malan tested fifty patients and states that the findings were constantly negative in the non-tuberculous cases and positive in the tuberculous cases, including some of tuberculous meningitis, peritonitis and pleurisy. There was no reaction in the advanced cases of phthisis, and he thinks that the findings would probably be negative also in case of an encapsulated and dormant tuberculous process. Alessandri's experience with the test on 75 patients merely repeats that of Malan in respect to its reliability.

128. **Symmetrical Gangrene of the Feet.**—Sassi reports two fatal cases in breast-fed infants, both of whom had had chronic enteritis. The gangrene was apparently the result of thrombosis of arteritic origin.

129. **Rhizomelic Spondylosis.**—Giovine reports from De Renzi's clinic at Naples five cases of this affection in women 21, 23, 25, 35, and 45 years old, respectively; the first symptoms were noticed several years earlier. There seemed to be an evident connection between the disease and preceding pains in the bones and joints, presumably of a rheumatic nature. A familial or hereditary tendency was also evident in some of the cases, and an "arthritic," gouty taint was manifest. Some of his patients presented symptoms of all three forms of the affection: neurogenic, articular and myogenic. The peculiar tenacity of the affection is a striking feature, but great benefit in respect to the pains was derived from energetic faradization, and the entire syndrome was very favorably influenced by profuse sweating induced by electric light baths.

134. **Early Sign of Measles.**—Belfadel calls attention to the peculiar location of the first signs of catarrhal conjunctivitis in the incipiency of measles. In 78 out of 111 patients he noted this phenomenon as the first sign of the disease. Instead of commencing as usual in the conjunctival cul-de-sac and spreading thence over the conjunctiva, the first signs of inflammation are noticed in that part of the bulbar conjunctiva which is exposed, close to the cornea. This is the point where pterygium usually develops. The measles conjunctivitis spreads in one or two days over the rest of the conjunctiva, but its appearance at this point may differentiate the disease in its earliest stages.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

ATLAS AND TEXT-BOOK OF HUMAN ANATOMY. By Johannes Sobotta, M.D., Professor of Anatomy in the University of Würzburg. Edited with Additions by J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy in the University of Toronto. Vol. III. Pp. 342. With 297 illustrations. Cloth. Price, $6.00. Philadelphia: W. B. Saunders Co., 1907.

HISTORY OF NURSING. By Adelaide Nutting, R.N., President of the American Federation of Nurses, and Lavina L. Dock, R.N., Secretary of the American Federation of Nurses. Vol. I. Cloth. Pp. 549. Vol. II. Pp. 461. Price, $5.00. New York: G. P. Putnam's Sons, 1907.

KOSMETISCHE HAUTLEIDEN, No. 17. Von Dr. S. Jessner. DIE AKNE und ihre Behandlung, No. 2. Dritte verbesserte Auflage. Dr. S. Jessner. JUCKENDE HAUTLEIDEN, Nos. 3 and 4, von Dr. S. Jessner. Paper. Index to entire collection supplied. Würzburg: A. Stubers Verlag (Curt Kabitzsch), 1907.

DISEASES OF THE NOSE AND THROAT. By D. Braden Kyle, M.D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fourth Edition, Revised and Enlarged. Pp. 725, with 215 illustrations. Cloth. Price, $4.00. Philadelphia: W. B. Saunders Co., 1907.

A MANUAL OF VENEREAL DISEASES. By Sir Alfred Keogh, K.C.B., Lieutenant C. H. Melville, R.A.M.C., Lieutenant Colonel Leishman, R.A.M.C., and Major C. E. Pollock, R.A.M.C. Pp. 282. Cloth. Price, $1.50. New York: Oxford University Press, 1907.

VARIATIONS OF THE BONES OF THE HAND AND FOOT. By Thomas Dwight, M.D., LL.D., Parkman Professor of Anatomy at Harvard Medical School. Pp. 101. Cloth. Price, $5.00. Philadelphia: J. B. Lippincott Co., 1907.

DER TATSACHLICHE KREBSERREGER SEIN ZYKLUS UND SEINE DAUERSPOREN. By Dr. Robert Behla, Geheimer Medizinalrat. Pp. 189. Paper. Berlin: Verlagsbuchhandlung von Richard Schoetz, Wilhelmstrasse, 10, 1907.

THINKING—FEELING—DOING. By E. W. Scripture, Ph.D., M.D., Assistant Neurologist, Columbia University. Second Revised Edition. Pp. 261. Cloth. New York: G. P. Putnam's Sons, 1907.

A TREATISE ON PLAGUE. By W. J. Simpson, M.D., Aberd., F.R.C.P., Lond., D.P.H., Camb. Professor of Hygiene, King's College, London. Pp. 466. Cloth. Cambridge: At the University Press, 1907.

FOURTH REPORT OF THE CAROLINE BREWER CROFT FUND CANCER COMMISSION OF HARVARD MEDICAL SCHOOL. Pp. 83. Paper. Boston: Harvard Medical School, 1907.

CHRISTIAN SCIENCE, THE FAITH AND ITS FOUNDER. By Lyman P. Powell, Northampton, Mass. Pp. 261. Cloth. New York: G. P. Putnam's Sons, 1907.

REPORT OF THE PRESIDENT OF THE BOARD OF HEALTH OF THE TERRITORY OF HAWAII. Pp. 166. Paper. Honolulu: Bulletin Publishing Co., 1907.

THIRTY-SEVENTH ANNUAL REPORT OF THE CENTRAL STATE HOSPITAL OF VIRGINIA. Pp. 88. Paper. Richmond: Davis Bottom, 1907.

YEARBOOK OF LEGISLATION. Vol. VIII. Pp. 100. Cloth. Price, $1.00. Albany: New York State Educational Department, 1907.

RABIES. By David Sime. M.D. Pp. 290. Cloth. Cambridge: At the University Press, 1903.